

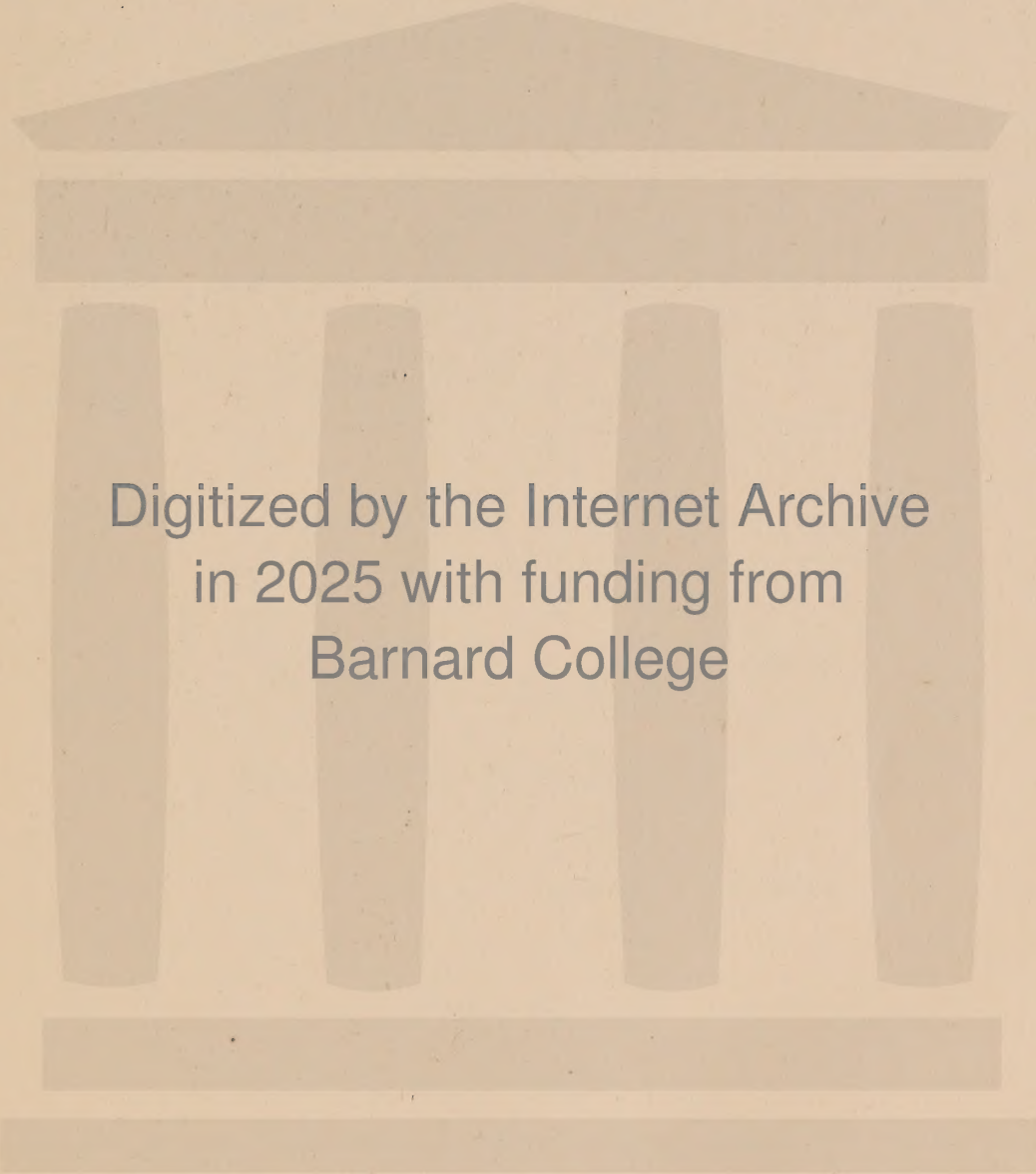


Columbia University
in the City of New York

BARNARD COLLEGE

ANNOUNCEMENT

1919-1920

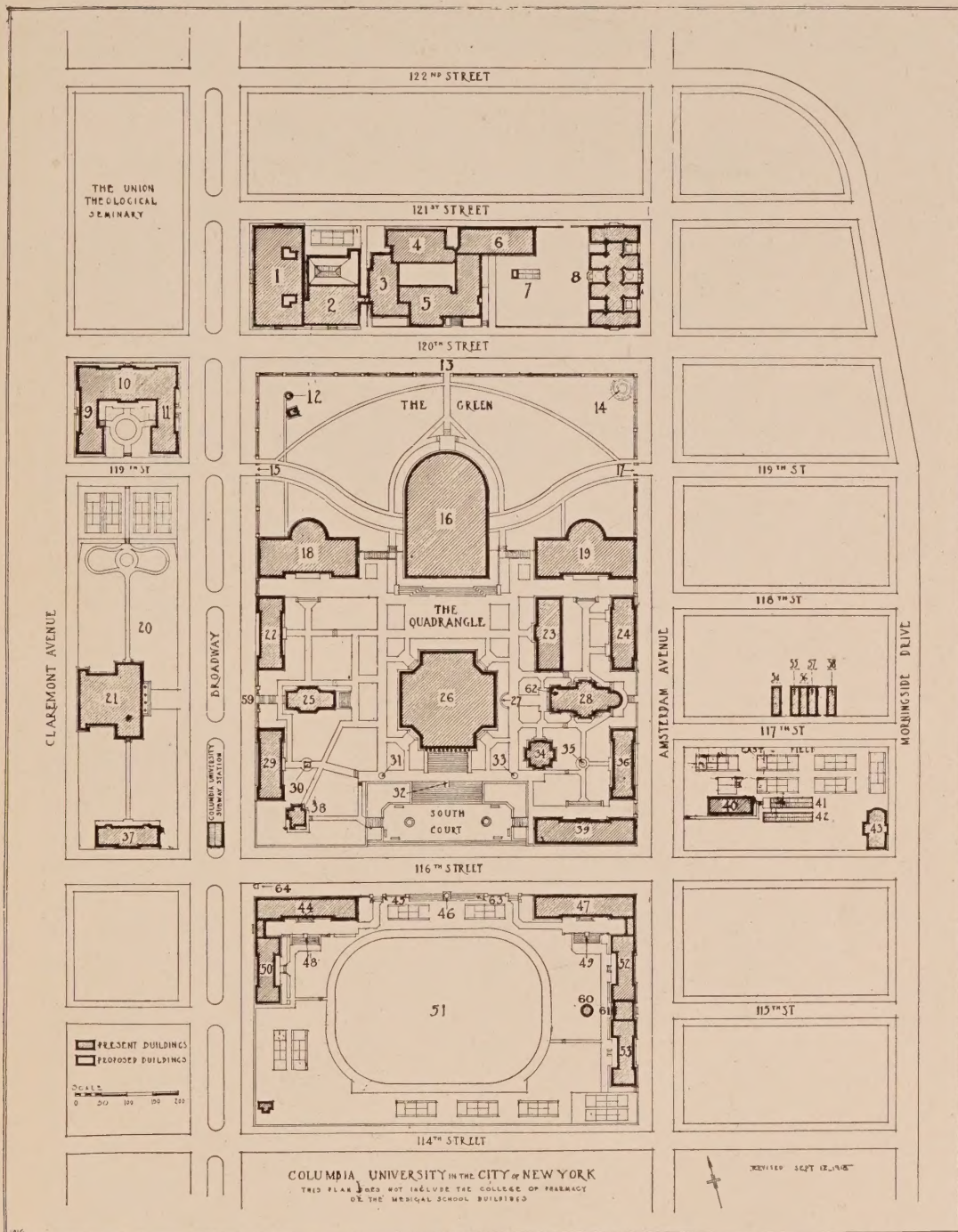


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INFORMATION

IN REGARD TO THE BUILDINGS AND GROUNDS OF

COLUMBIA UNIVERSITY

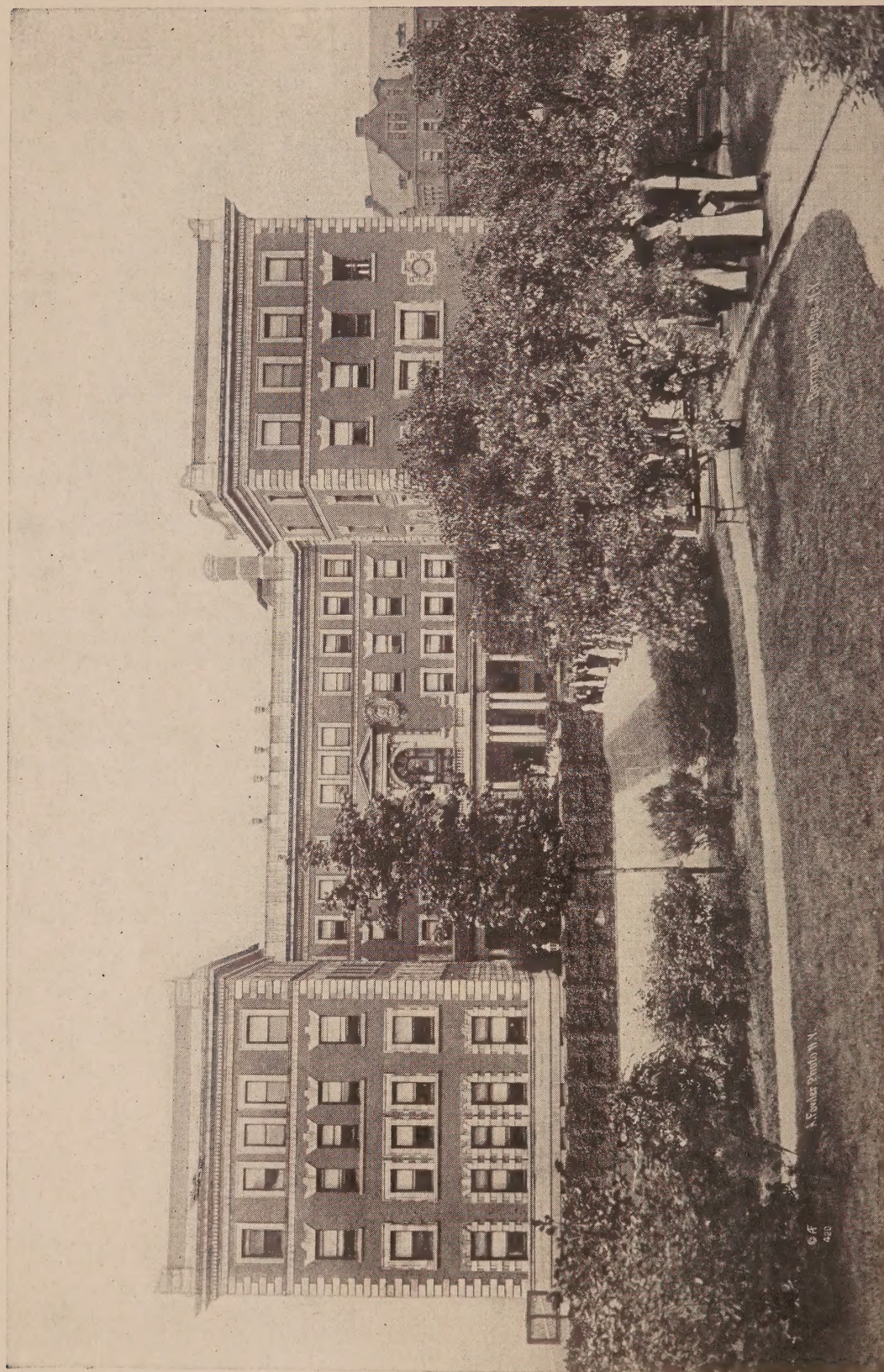


Teachers College

1. Horace Mann School
2. Thompson Memorial Bldg.
3. Milbank Memorial Chapel
4. Macy
5. Main Building
6. Household Arts
7. Peabody Greenhouse
8. Whittier
- Barnard College
9. Fiske
10. Milbank
11. Brinckerhoff
20. Milbank Quadrangle
21. Students' Hall
37. Brooks Hall
- Columbia University
12. Wilde Observatory
13. Class of 1882 Gates
14. Statue of the great God Pan
15. Mapes Gates
16. University
17. Class of 1888 Gate

18. Havemeyer
19. Schermerhorn
22. Engineering
23. Avery
24. Fayerweather
25. Earl
26. Library
27. Class of 1886 Exedra
28. St. Paul's Chapel
29. Mines
30. Meunier's Hammerman, 1889 Mines Class Gift
31. Lafayette Post Flag Staff
32. Statue of Alma Mater
33. Class of 1881 Flag Staff
34. East
35. Class of 1887 Well Head
36. Philosophy
38. Faculty Club
39. Kent
40. Crocker Research
41. Botany Greenhouse
42. Agriculture Greenhouse

43. President's House
44. Journalism
45. Classes of 1884 and 1899 Tablet
46. Class of 1885 Sun Dial
47. Hamilton
48. Jefferson Statue
49. Hamilton Knox
50. Farnald
51. South Field
52. Hartley
53. Livingston
54. Columbia House
55. Dean Hawkes
56. Chaplain Knox
57. Maison Francaise
58. Carnegie Endowment
59. Class of 1891 Gates
60. Van Amringe Memorial
61. 1906 Clock
62. Class of 1893 Chapel Bell
63. Rives Memorial Steps
64. Class of 1890 Pylon



FISKE HALL

MILBANK HALL

BRINCKERHOFF HALL



Columbia University
Bulletin of Information

BARNARD COLLEGE

ANNOUNCEMENT

1919-1920

MAY, 1919

FORM OF BEQUEST

To Barnard College I give and bequeath the sum of \$ _____, for
the uses and purposes of said Corporation.

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among the founders of Barnard College]

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COMMITTEE ON SCHOLARSHIPS: The DEAN, *chairman*, MISS LATHAM, Dr. LE DUC, and the PROVOST (*ex-officio*).

¹ Absent on leave, 1919-20

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Barnard College

GENERAL STATEMENT

Columbia University.—Columbia University was founded in 1754 as Kings College by royal grant of George II, King of England, "for the Instruction of youth in the Learned Languages, and the Liberal Arts and Sciences." The Revolutionary War interrupted its active work; but in 1784 it was reopened as Columbia College. In 1912, the corporate title was changed to Columbia University.

The University at the present time consists of Columbia College, the undergraduate college of liberal arts for men, which offers a program of studies leading to the degree of Bachelor of Arts; the School of Law (not open to women), with courses leading to the degrees of Bachelor and Master of Laws; the College of Physicians and Surgeons, with courses leading to the degrees of Bachelor of Science and Doctor of Medicine; the Schools of Mines, Engineering, and Chemistry (not open to women), with courses leading to the several engineering degrees, and the degree of Master of Science; the School of Architecture, with courses leading to the degrees of Bachelor of Architecture and Master of Science; the School of Journalism, with courses leading to the degrees of Bachelor of Literature and Master of Science; the School of Business, with courses leading to the degrees of Bachelor and Master of Science; the School of Dentistry, with courses leading to the degrees of Bachelor of Science and Doctor of Dental Surgery; the non-professional graduate Faculties of Political Science, Philosophy, and Pure Science, with courses leading to the degrees of Master of Arts and Doctor of Philosophy. In addition to these Schools and Faculties, the University includes the independent corporations of Barnard College, the undergraduate college for women, with a course leading to the degree of Bachelor of Arts; Teachers College, including the Faculties of Education and Practical Arts, with courses leading to the degrees of Bachelor of Science, Master of Arts, and Master of Science; and the New York College of Pharmacy, with courses leading to the degrees of Pharmaceutical Chemist, Bachelor of Science and Doctor of Pharmacy.

Founding of Barnard College.—Barnard is the undergraduate college for women of Columbia University. In 1889 a group of men and women who wished to provide for women in New York City a college education fully equal to that offered to men succeeded in obtaining the sanction of the Trustees of Columbia for the establishment of an affiliated woman's college. A charter was granted by the State of New York, and promises of subscriptions for the support of the college during the first four years of its existence were secured. Because President Frederick A. P. Barnard of Columbia College had for many years been an

ardent advocate of the admission of women to Columbia, the founders of the new college gave it his name. With seven instructors selected from the teaching staff of Columbia and with twenty-six students, Barnard opened in the fall of 1889 in a rented house at 343 Madison Avenue.

Relation to the University.—In 1900, when the growth of the College had made inappropriate the original informal arrangement for instruction, an agreement was made between the Trustees of Columbia College and of Barnard College by which Barnard was incorporated in the educational system of the University. By the provisions of this agreement, the President of the University is *ex-officio* President of Barnard College. Barnard professors are appointed by the University on the nomination of the Dean with the approval of the President and the Trustees, and rank as professors of the University; in exchange for instruction given by them at Columbia, certain Columbia instructors give courses at Barnard. The graduates of Barnard receive their degrees from Columbia, and these degrees are maintained as of equal value with the corresponding degrees conferred upon the graduates of Columbia College. The University library is open to women on the same terms as to men. Various opportunities in other schools of the University have also, through the relation of Barnard College to Columbia, been opened to Barnard students who wish to avail themselves of the advantage of professional training. On the other hand, Barnard has its separate corporate and financial organization, with its own Board of Trustees. It retains its own internal administration, conducted by the Dean and the Provost, who are appointed by the President with the advice and consent of the Trustees of Barnard. Its courses are determined and administered by its own Faculty, consisting of all professors who give instruction at Barnard.

Buildings and Grounds.—Since 1897 Barnard has occupied the land on Broadway between 119th and 120th Streets, just west of the main buildings of the University. In 1903, Milbank Quadrangle, extending from 119th to 116th Street, was added through the gift of Mrs. A. A. Anderson. Milbank Hall and Brinckerhoff Hall, erected in 1896, the gifts respectively of Mrs. Anderson and Mrs. Van Wyck Brinckerhoff, and Fiske Hall, erected in 1898, the gift of Mrs. Josiah M. Fiske, are three adjoining buildings on 119th Street; they contain the administrative offices, lecture rooms, and laboratories. Brooks Hall, at the southern end of the Quadrangle on 116th Street, erected in 1907, is the hall of residence. Students Hall, given by Mr. Jacob H. Schiff and erected in 1917, is on Milbank Quadrangle near 117th Street; it contains the gymnasium, swimming-pool, reading-room, lunch-room, doctor's and nurse's offices, and rooms for student organizations.

Financial Statement.—The College owns equipment, buildings, and grounds of an estimated value of over \$2,500,000, and holds productive funds providing a net income of about \$90,000.

Course of Study.—Barnard College offers a liberal course of undergraduate instruction for women, of four years' duration, leading to the degree of Bachelor of Arts. This course is an amalgamation of the former separate A.B. and B.S. courses.

Students who wish two years only of collegiate work, in preparation for professional schools, may enter under the same conditions as those intending to complete

the requirements for the Bachelor of Arts degree, and take, during the freshman and sophomore years, a program modified to meet the requirements of the professional school to which the transfer is to be made.

Under certain circumstances, Barnard students in the Bachelor of Arts course may, after three full years of work at Barnard College, receive permission to substitute the first year of an approved professional school for the senior year at college, and still obtain the Bachelor of Arts degree.

Academic Discipline.—The admission, continuance upon the rolls, and graduation of any student is subject to the full disciplinary power of the University authorities, as prescribed by the statutes of the University.

The College makes all possible provision for safeguarding the health of its students and it reserves the right to require the withdrawal of any student whose health, in the opinion of the College Physician, does not warrant her continuing her college course.

Students who are not residing in Brooks Hall, Whittier Hall, the Alumnae Coöperative Dormitory, or with their parents, must have their places of residence approved by the Dean before making final arrangements.

ADMISSION

To Columbia University in General.—A student may enter Columbia University as:

1. A matriculated student accepted and registered by the proper authorities as having fulfilled the preliminary qualifications for candidacy for a degree, certificate of proficiency, or diploma. A period of regular attendance upon all stated academic exercises amounting to at least one academic year must be completed by all such candidates.

2. A non-matriculated student, permitted to attend such courses of instruction as he or she may be qualified to take, but not regarded as a candidate for a degree, certificate of proficiency, or diploma. Such students are expected to conform to the same standards of attendance and scholarship as are required of matriculated students. Non-matriculated students may receive a formal statement of the satisfactory completion of any course. (See p. 29.)

Admission to the several schools and colleges of Columbia University presupposes certain educational qualifications, but the possession of these qualifications does not entitle a candidate to admission unless his or her character and personality are acceptable to the University and unless he or she is physically fit to do the work which he or she desires to undertake.

To Barnard College in Particular.—Admission as a matriculated student to Barnard College is obtained only by examination, except that in suitable cases the certified credentials of degree-granting institutions may be accepted for the subjects or parts of subjects which they cover.

Except for reasons of weight, candidates for admission to the freshman class must be at least fifteen years of age at the time of matriculation; candidates for admission to advanced standing must be correspondingly older. Every candidate must, before admission, present a certificate of good moral character from her last teacher, or from some properly qualified citizen. Students from

other colleges or universities must present certificates of honorable dismissal.

Information regarding admission may be obtained in person, or by mail or telephone, from the Secretary of Barnard College.

ADMISSION TO THE FRESHMAN CLASS

In order to enter the freshman class, a candidate must satisfy the College as to

1. Adequate preparation in the subjects required for admission (p. 18).
2. The possession of the qualities of mind and character deemed requisite for the most profitable pursuit of a college course.
3. Sound health.

It should be clearly understood that the satisfaction of any one or two of these requirements alone does not entitle the candidate to admission. Evidence on all of these points is considered by the Committee on Admissions in its selection from among the candidates of those best fitted for a college course.

1. **Examination and School Record.**—Evidence of adequate preparation in the subjects required for admission must be: examination (Old or New Plan, see p. 19) and school record.

The following examinations may be offered in partial fulfilment of the requirements for admission: those given by the College Entrance Examination Board (p. 20), by Columbia University (p. 20), and, under certain conditions, those given by the Education Department of the State of New York or by other colleges (see p. 25).

The results of a candidate's examinations may stand to her credit for twenty-nine months but no longer.

She may not present herself at more than four series of examinations except by special permission of the Committee on Admissions.

In making application for examination a candidate must file with the Secretary of Barnard College, for the use of the Committee on Admissions, a statement from the principal of her school or from her last instructor indicating the extent and character of her preparation in each subject in which she applies for examination. The Committee on Admissions may withhold credit when this requirement is not met, and will give weight, in estimating the results of the candidate's entrance examinations, to the record of her school performance. Blanks for school records may be obtained from the Secretary.

2. **Certificate of Character.**—Evidence of the possession of the requisite moral and personal qualities may be a confidential estimate of character and personality signed by an authorized representative of the candidate's former school testifying to the candidate's possession of a good moral character and of qualities which promise future usefulness of a high order. This estimate should be full and specific. It may be supplemented by letters from teachers and other responsible persons. All such certificates and letters should be sent by the writers directly to the Secretary.

3. **Health.**—Evidence of sound health may be an acceptable certificate from the candidate's family physician or from the College Physician. In case of doubt an examination by the College Physician will be required. The proper blanks may be obtained from the Secretary of Barnard College.

Preliminary Application for Admission.—Each student who plans to enter the College should file a preliminary application for admission with the Secretary at as early a date as possible. Barnard College is finding it necessary to limit the number of students admitted. It may be expected, therefore, that the requirements for admission will be administered with increasing strictness. Other things being equal, early applications will receive the preference.

SUBJECTS REQUIRED FOR ADMISSION

The requirement for admission to the freshman class is proficiency in fifteen units of secondary school subjects, of which some are prescribed and the remainder elective, as specified below. The unit implies the study of a subject for a time equivalent to five periods a week for one year.

	COUNTING IN UNITS
Candidates must offer:	
English, elementary (page 32)	3
Mathematics, elementary (page 45)	3
Foreign languages, of which at least 3 must be in one language . .	5
Elective subjects to be selected from those accepted for admission, as listed below	4
	—
	15

Elective Subjects

Candidates may offer any of the following subjects, not included among their prescribed subjects, without other restriction than that to offer an intermediate or advanced subject will involve offering, either at the same time or earlier, the corresponding elementary subject:

	COUNTING IN UNITS
¹ Botany (page 30)	1
Chemistry (page 31)	1
Drawing (page 31)	1
² English, advanced (College) (page 36)	1
French, elementary (page 36)	2
French, intermediate (page 38)	1
French, advanced (page 38)	1
German, elementary (page 38)	2
German, intermediate (page 40)	1
German, advanced (page 41)	1
¹ Greek, elementary (page 41)	2 or 3
² Greek, advanced (College) (page 42)	1
History, elementary (page 42)	1, 2, 3, or 4
² History, advanced (College) (page 43)	1
² Italian (page 43)	2

¹ Candidates will be examined in this subject only in June and in September.
² Candidates will be examined in this subject in September only.

Latin, elementary (page 44)	2, 3, or 4
² Latin, advanced (College) (page 44)	1
Mathematics, advanced (College) (page 45)	$\frac{1}{2}$, 1, or $1\frac{1}{2}$
² Musical Appreciation or ¹ Harmony (page 46)	1
Physics (page 47)	1
Physiography (page 47)	1
Spanish, elementary (page 47)	2
Spanish, intermediate (page 48)	1
¹ Zoölogy (page 49)	1

ENTRANCE EXAMINATIONS ³

There are two plans of admission to Barnard College.

Old Plan.—Under this plan, that prescribed before 1918 for all candidates, a candidate must present herself for examination in all of the fifteen units which she offers for admission.

New or Alternative Plan.—Barnard College has also approved an alternative plan of admission as a permissible substitute for the method of admission by the 'ordinary' examinations of the College Entrance Examination Board, Columbia University, and the New York State Education Department in fifteen entrance units. By this alternative method, which corresponds largely to the New Plan of admission adopted by Harvard, Princeton, Yale, Mount Holyoke, Smith, Vassar, and Wellesley, a candidate who completes with an acceptable degree of proficiency a satisfactory school course may receive permission to satisfy the examination requirements for admission by passing 'comprehensive' entrance examinations in four subjects. No change is made in the content of the requirements; the subjects to be covered by the school record of preparation must include the fifteen units regularly required for admission.

The subjects of the four comprehensive examinations to be taken must be as follows, unless for reasons of weight the Committee on Admissions allows some substitution for 1 or 3:

1. English.
2. A foreign language.
3. Mathematics.
4. A fourth subject, designated by the applicant from the subjects accepted for entrance. This choice will be subject to the approval of the Committee on Admissions, which may at its discretion substitute another subject.

These four examinations must be taken at one time. Comprehensive examinations (see p. 50) are held by the College Entrance Examination Board in June, and by Columbia University in September but *not* in January.

At least two examinations must cover more than two units each.

¹ Candidates will be examined in this subject only in June and in September.

² Candidates will be examined in this subject in September only.

³ Candidates who find that examinations are fixed for days set apart for religious purposes by the church to which they belong, and who are prevented by conscientious scruples from attending such examinations, are requested to make application to the Committee on Admissions through the Registrar of Barnard College for equitable relief. It should be noted, however, that in case alternative opportunities for taking a given examination are statedly offered, as for instance the January, June, and September entrance examinations, such students are expected to present themselves on the day which is not set apart as a holy day.

In each subject chosen for examination, the comprehensive examination covering all the units offered by the candidate for admission must be taken.

Applicants who desire to use the New Plan of admission must furnish school reports covering the entire record of subjects and grades for four years previous to college entrance and a confidential estimate of character, personality, and promise of usefulness from the school principal. These should be sent to the Secretary of the College, if possible before February 15 of the year in which the examinations are to be taken. The Committee on Admissions must give its permission, based on these reports, before the applicant may take the examinations.

The student, if admitted, will be admitted without conditions. If she fails of admission she will not be considered for admission again under the New Plan until after the interval of one academic year. She may, however, present herself at the next series of examinations as a candidate for admission under the Old Plan, offering examinations in all of the fifteen units.

A candidate who wishes to enter by the New Plan may, if she desires, test herself by taking preliminary examinations—not to be credited toward admission—before she presents herself for the four comprehensive examinations which she plans to count.

Time.—Examinations for admission to Barnard College are held each year in January, June, and September, and, under certain circumstances, in May. (*Comprehensive examinations, except in Greek and Latin, in June and September only.*) In 1919 they will be held June 16–21 and September 15–20, and in 1920, January 15–21 and June 21–26.

Place.—In June the entrance examinations will be conducted by the College Entrance Examination Board, of which Columbia University is a member, at Barnard College and at a large number of widely distributed points. A list of these points will be published by the Board (431 West 117th Street, New York, N. Y.) about March 1. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1.

In September, 1919, and January, 1920, the entrance examinations of Barnard College will be conducted by the Columbia University Committee on Admissions, and will be held only at the College.

Application for Examination.—Every candidate for examination is required to file an application in advance for *each series of examinations* which she wishes to take. For the examinations in June, 1919, the application must be filed with the Secretary of the College Entrance Examination Board, 431 West 117th Street, New York, N. Y. Applications for examination in the United States east of the Mississippi River or on the Mississippi River must be filed on or before May 26. Applications for examination elsewhere in the United States or in Canada must be filed on or before May 19, and applications for examination at points outside of the United States and Canada must be filed on or before May 5. Requests for blank forms of application should be addressed to the Secretary of the Board.

When the candidate has failed to obtain the required blank form of application for examination the usual examination fee will be accepted if the fee arrive not later than the specified date accompanied by a memorandum containing the

name and address of the candidate, the examination center at which she wishes to present herself, and a list of all the subjects in which she may have occasion to take the Board's examinations.

A candidate for a competitive scholarship to be awarded on the basis of the June examinations must, in her application to the Secretary of the College Entrance Examination Board, mention the scholarship for which she is competing.

For the examinations in September, 1919, and January, 1920, applications must be filed with the Registrar of Barnard College on or before September 8 and January 8, respectively. Requests for blank forms of application should be addressed to the Secretary of Barnard College.

Candidates who wish to use the New Plan of admission (see p. 19) should, if possible, submit their records to the Secretary of the College before February 15 of the year in which the examinations are to be taken.

Examination Fee.—*The fee for each series of examinations held by the College Entrance Examination Board in June is \$6; for each series of examinations held by Columbia University in January or September, \$5.*

Every application for examination in June must be accompanied by a fee of \$6 in the form of a postal order, express order, or draft on New York, to the order of the *College Entrance Examination Board*, for all candidates examined at points in the United States and Canada, and \$20 for all candidates examined at points outside of the United States and Canada.

Every application for examination in September or in January must be accompanied by a fee of \$5 in the form of a postal order, express order, or draft on New York, to the order of *Barnard College*.

If a late application is accepted by the College Entrance Examination Board a second fee of \$6 must be paid; if by the College, a second fee of \$5.

The receipt for the examination fee must be carefully preserved by the candidate and shown (not surrendered) to the supervisor in charge of the examinations as evidence of her right to be admitted to the same.

The fee for examination in June cannot be returned unless the request for the cancellation of the application and the return of the fee reaches the Secretary of the Board on or before June 9, 1919. The fee for examination in September or January cannot be returned unless the request for the cancellation of the application and the return of the fee reaches the Registrar of Barnard College on or before September 11, 1919, or January 10, 1920.

Special Examinations.—Special entrance examinations in certain subjects may be held in May, under the management of the Columbia University Committee on Admissions. Schools desiring these examinations should apply through the Secretary of Barnard College to the Committee on Admissions, which may, at its discretion, grant this privilege. The fee for each candidate for such a series of special examinations will generally be \$10.

Comprehensive Examinations.—The College Entrance Examination Board also holds a set of Comprehensive Examinations designed primarily to meet the needs of candidates wishing to enter by the New or Alternative Plan of admission (see pp. 19, 50). Candidates for admission by the Old Plan may take the comprehensive examination in the whole of any subject offered instead of the 'ordinary' examinations in the separate parts of that subject, *e. g.*, English Cp.

instead of English 1 and 2. *Candidates offering Intermediate Spanish or Greek at the June examinations should take comprehensive examinations in these subjects, and candidates offering Latin should usually do so* (see pages 42, 44, 50).

The applications and examination fees of candidates desiring to take the Board's comprehensive examinations are subject to the same general rules as the applications and fees of other candidates for examination (see page 20).

Schedule of Examinations.—Candidates taking the examinations must report to the supervisor, in the examination room, fifteen minutes in advance of the first examination which they are to attend.

June 16-21, 1919

On Monday afternoon and on every subsequent half-day a candidate will be permitted to remain under examination for four hours, but not longer, if the periods assigned to the examinations that she wishes to take aggregate four hours or more.

Monday, June 16

9.30 A.M.—12.30 P.M.

Mathematics *a*, elementary algebra complete (3 hours)
 Mathematics *a*, i, algebra to quadratics (2 hours)
 Mathematics *a*, ii, quadratics and beyond (2 hours)
 COMPREHENSIVE MATHEMATICS (3 hours)

2 P.M.—6 P.M.

Mathematics *cd*, plane and solid geometry (3 hours)
 Mathematics *c*, plane geometry (2 hours)
 Mathematics *d*, solid geometry (2 hours)

Tuesday, June 17

9 A.M.—1 P.M.

English 1, grammar and composition (2 hours)
 English 2, literature (2 hours)
 COMPREHENSIVE ENGLISH (3 hours)

2 P.M.—6 P.M.

Mathematics *b*, advanced algebra (2 hours)
 Mathematics *f*, plane trigonometry (2 hours)

Wednesday, June 18

9 A.M.—1 P.M.

Latin *p*, sight translation of prose (2 hours)
 Latin 6, advanced prose composition (1 hour)
 COMPREHENSIVE LATIN (3 hours)

2 P.M.—6 P.M.

Latin 3, second year Latin (2 hours)
 Latin *q*, sight translation of poetry (2 hours)
 COMPREHENSIVE CHEMISTRY (3 hours)

Thursday, June 19

9 A.M.—1 P.M.

History *a*, ancient (2 hours)
 History *b*, medieval and modern (2 hours)
 History *c*, English (2 hours)
 History *d*, American (2 hours)
 COMPREHENSIVE HISTORY (3 hours)

2 P.M.—6 P.M.

French *a*, elementary (2 hours)
 French *b*, intermediate (2 hours)
 French *bc*, intermediate and advanced (2 hours)
 Spanish, elementary (2 hours)
 COMPREHENSIVE FRENCH (3 hours)

Friday, June 20

9 A.M.—1 P.M.

German *a*, elementary (2 hours)
 German *b*, intermediate (2 hours)
 German *bc*, intermediate and advanced (2 hours)
 COMPREHENSIVE GERMAN (3 hours)
 COMPREHENSIVE SPANISH (3 hours)

2 P.M.—6 P.M.

Botany (2 hours)
 Chemistry (2 hours)
 Geography (2 hours)
 Physics (2 hours)
 Zoölogy (2 hours)
 COMPREHENSIVE PHYSICS (3 hours)

Saturday, June 21

9 A.M.—1 P.M.

Freehand Drawing (2 hours)
 Greek *a*, grammar and elementary composition (2 hours)
 Greek *b*, Xenophon's *Anabasis* (2 hours)
 Greek *f*, advanced composition (2 hours)
 Greek *g*, sight translation of prose (2 hours)
 Music *b*, harmony (2 hours)
 COMPREHENSIVE GREEK (3 hours)

2 P.M.—4 P.M.

Greek *c*, Homer's *Iliad* (2 hours)

September 15-20, 1919, and January 15-21, 1920*Monday, September 15, and Thursday, January 15*

Mathematics <i>a</i> , i (algebra to quadratics)	9-11
Mathematics <i>a</i> , ii (quadratics and beyond)	9-11
Mathematics <i>a</i> (elementary algebra, complete)	9-12

COMPREHENSIVE ENGLISH (September only)	9-12
History <i>d</i> (American history)	1.30-3.30
History <i>g</i> (United States history and American government) . .	1.30-3.30
Physics	3.45-5.45
Botany (September only)	3.45-5.45
Zoölogy (September only)	3.45-5.45
COMPREHENSIVE CHEMISTRY (September only)	2-5
COMPREHENSIVE PHYSICS (September only)	2-5

Tuesday, September 16, and Friday, January 16

COMPREHENSIVE LATIN	9-12
History <i>a</i> (ancient history)	1.30-3.30
History <i>b</i> (medieval and modern history)	1.30-3.30
History <i>h</i> (modern European history)	1.30-3.30
German <i>a</i> (elementary)	3.45-5.45
COMPREHENSIVE FRENCH (September only)	2-5
COMPREHENSIVE SPANISH (September only)	2-5

Wednesday, September 17, and Saturday, January 17

Mathematics <i>c</i> (plane geometry)	9-11
Mathematics <i>d</i> (solid geometry)	9-11
Mathematics <i>cd</i> (plane and solid geometry)	9-12
COMPREHENSIVE ELEMENTARY MATHEMATICS (September only)	9-12
French <i>x</i> (elementary aural)	11.30-12.30
French <i>a</i> (elementary)	1.30-3.30
German <i>b</i> (intermediate)	3.45-5.45
German <i>bc</i> (intermediate and advanced)	3.45-5.45
Spanish <i>a</i> (elementary)	3.45-5.45
Italian (September only)	3.45-5.45
COMPREHENSIVE GERMAN (September only)	2-5

Thursday, September 18, and Monday, January 19

English 1 (grammar and composition)	9-11
COMPREHENSIVE HISTORY (September only)	9-12
German <i>y</i> (intermediate aural)	11.30-12.30
French <i>b</i> (intermediate)	3.45-5.45
French <i>bc</i> (intermediate and advanced)	3.45-5.45
COMPREHENSIVE GREEK (September only)	2-5
COMPREHENSIVE ADVANCED MATHEMATICS (September only) .	2-5

Friday, September 19, and Tuesday, January 20

Mathematics <i>b</i> (advanced algebra)	9-11
Spanish <i>b</i> (intermediate)	9-11
German <i>x</i> (elementary aural)	11.30-12.30
English 2 (literature)	1.30-3.30
Spanish <i>x</i> (elementary aural)	3.45-4.45
Chemistry	3.45-5.45

Physiography	3.45-5.45
Music <i>b</i> (harmony) (September only)	3.45-5.45

Saturday, September 20, and Wednesday, January 21

Advanced English (September only)	9-12
Advanced Greek (September only)	9-12
History <i>c</i> (English history)	9-11
History <i>f</i> (modern England and the British Empire)	9-11
Mathematics <i>f</i> (plane trigonometry)	9-11
Advanced Latin (September only)	9-12
Advanced History (September only)	9-12
French <i>y</i> (intermediate aural)	11.30-12.30
Drawing	1.30-3.30
Music <i>a</i> (appreciation) (September only)	1.30-3.30
Spanish <i>y</i> (intermediate aural)	3.45-4.45

Substitutes for the Board or Barnard Examinations.—Barnard College accepts in lieu of its entrance examinations or those of the College Entrance Examination Board ¹ no credentials of any sort except (1) the examination reports of the Education Department of the State of New York, showing that the candidate has completed certain courses in a high school in the State of New York and that she has passed the examinations of the Education Department in these subjects ² (for table of equivalents, see page 26), (2) with special permission, the official reports of entrance examinations taken in good faith for admission to other colleges, and (3) certain courses of the Summer Session of Columbia University (see p. 27). *These credentials are accepted only in so far as they cover specifically, and by name, subjects or lettered (or numbered) parts of a subject which are accepted for admission to Barnard College, and state in percentages the grades received in the examinations in such subjects.* Candidates must take the regular entrance examinations in the subjects in which their credentials are not deemed adequate. Except for reasons of weight, credentials are not accepted as covering subjects passed more than twenty-nine months previous to the date at which the candidate intends to begin residence. No certificates from preparatory schools or from preparatory departments of colleges will be accepted in lieu of entrance examinations.

In order to be credited toward entrance, the candidate's credentials, together with (1) the statement of the extent and character of her preparation in each subject offered (see School Record, page 17), and (2) any certificates for science laboratory work or drawings that she has to present, must be in the hands of the Committee on Admissions on or before September 8, 1919, for admission in September, and on or before January 8, 1920, for admission in February.

State Education Department Examinations.—Candidates for admission on the credentials of the New York State Education Department should notify the Secretary of Barnard College of their intention at least six weeks prior to the opening of the term in September or in February, *i. e.*, on or before August 13,

¹ The numerical ratings of the Board are accepted by the College, but the passing mark is fixed by the Committee on Admissions.

² 70% will ordinarily be regarded as the lowest passing mark in these examinations.

1919, or December 26, 1919, in order that sufficient time may be allowed for obtaining their records from the Education Department.

In these examinations 70% will ordinarily be regarded as the lowest passing mark.

The subjects for which the State credentials are accepted and their value in Barnard entrance units are as follows:

	State Education Department counts	Barnard units
¹ Botany (Advanced Botany)	5	1
¹ Chemistry	5	1
¹ Drawing, Elementary Design, and Elementary Representation	4	1
English, Four Years	14-16	3
French, Two Years	10	2
French, Third Year	5	1
French, Fourth Year	5	1
German, Two Years	10	2
German, Third Year	5	1
German, Fourth Year	5	1
Greek:		
Grammar and Composition	10	2
Second Year Greek		
Translation of Prose at Sight		
Third Year Greek	5	½
Advanced Prose Composition	0	½
¹ History:		
¹ Ancient	5	1
¹ Modern, Parts I and II	6	1
¹ English	5	1
¹ American	5	1
Italian	10	2
² Latin (<i>for candidates offering 4 units</i>):		
² Prose at Sight or Third Year Latin	4	1½
² Verse at Sight or Fourth Year Latin	4	1½
Advanced Prose Composition	0	1
Latin (<i>for candidates offering 2 or 3 units</i>):		
² Second Year Latin	8	2
² Prose or Verse at Sight or Third or Fourth Year Latin	4	1

¹ Credit cannot be secured in these subjects unless the following requirements are met:

(a) In all natural sciences, teachers' certificates of laboratory work, covering exercises described in the definitions of requirements in each subject (pp. 30-50), must be presented in accordance with the regulations stated on page 52. In doubtful cases, the candidate will be required to submit a certified laboratory note-book.

(b) In Drawing, a teacher's certificate, covering at least twenty drawings, must be presented in accordance with the regulations stated on page 52.

(c) In History, only the five-count electives will be accepted.

² Owing to the fact that the examinations in third and fourth year Latin given by the State Education Department are not entirely at sight, as now regularly required by Columbia University, candidates entering on State examinations are strongly advised to take the examinations in Latin prose at sight and verse at sight, either instead of or in addition to the third and fourth year papers. The College reserves the right to examine in Latin any candidate who has not passed these sight translation papers, in case for any reason it deems it desirable to do so. This regulation applies to all examinations taken in June, 1919, and thereafter.

Mathematics:

Algebra	}	7	2
Intermediate Algebra			
Plane Geometry		5	1
Solid Geometry		2	$\frac{1}{2}$
Plane Trigonometry		2	$\frac{1}{2}$
Advanced Algebra		2	$\frac{1}{2}$
¹ Physics		5	1
¹ Physiography		5	1
Spanish, Two Years		10	2
Spanish, Third Year		5	1
¹ Zoölogy (Advanced Zoölogy)		5	1

Summer Session Work in Lieu of Entrance Examinations.—A grade of C (except for Latin sZ, in which B will be required) in the following courses of the Summer Session of Columbia University will fulfill entrance requirements or remove entrance conditions in the subjects specified in each case:

Chemistry sA—for chemistry
 French sA1, sA2, sA3—for elementary French
 French sB1—for intermediate French
 French sB2—for advanced French
 Geography s25—for physiography
 German sA1, sA2—for elementary German
 German sB1 with sB2—for intermediate German
 German s5 with s6—for advanced German
 Italian s1 with s3—for elementary Italian
 Latin sZ—for advanced Latin prose composition (a grade of B required)
 Mathematics sA1, sA2, s1—for the corresponding parts of advanced mathematics
 Physics sA—for physics
 Spanish s1 with s2—for elementary Spanish
 Spanish s3—for intermediate Spanish

Other Summer Session courses may be counted as fulfilling entrance requirements only by special permission.

Entrance Conditions and Probation.—A candidate for admission who has not secured the prescribed fifteen units may be admitted to the freshman class with conditions, if, in the judgment of the Committee on Admissions, she is qualified to undertake the work of the class. General deficiency in any prescribed subject will disqualify for admission. Except for reasons of weight a student who has failed to complete a course in a good high school or preparatory school will not be admitted with conditions.

¹ Credit cannot be secured in these subjects unless the following requirements are met:

(a) In all natural sciences, teachers' certificates of laboratory work, covering exercises described in the definitions of requirements in each subject (pp. 30-50), must be presented in accordance with the regulations stated on page 52. In doubtful cases, the candidate will be required to submit a certified laboratory note-book.

(b) In Drawing, a teacher's certificate, covering at least twenty drawings, must be presented in accordance with the regulations stated on page 52.

All entrance conditions must be removed within one calendar year from the date of entrance.

A student admitted conditionally or by credentials from another college or from the State Education Department will be held under probation during the first winter or spring session of residence. By Tuesday of the week preceding the Thanksgiving holidays, each department in which students on probation attend will make to the Committee on Instruction a special report of progress in the case of every such student. The Dean, on the recommendation of the Committee on Instruction, will as soon as practicable after the mid-year examinations decide as to each student on probation whether she shall be admitted to full standing, have her period of probation extended, or be dropped from the roll.

The mark C, B, or A, obtained at the end of the first winter or spring session of residence, in a course of a higher grade than the entrance requirement, will be regarded as removing an entrance condition in that subject, unless the condition was incurred in a part of the subject not directly involved in the work of the college course. To remove a condition by college work a mark of at least thirty-five per cent. must have been obtained in an entrance examination. Any condition not so removed must be satisfied by a regular entrance examination for which an application must be filed and a fee paid precisely as required of a candidate for admission. (Regarding the removal of entrance conditions by work in the Summer Session of Columbia University, see above.)

While work done in University extension courses is not primarily accepted in lieu of entrance examinations, *entrance conditions* may be removed by a grade of at least C subsequently obtained in the appropriate extension courses. Students in college who desire to avail themselves of this privilege must submit their choice of extension courses for the approval of the Committee on Instruction as a part of their regular college work. (For the general regulations regarding the election of extension courses, see page 57.)

ADMISSION TO ADVANCED STANDING

Students who have satisfactorily completed at least a year of work at an acceptable college or scientific school or foreign institution of equivalent grade may be admitted with such advanced credit as their previous records may warrant.

Each candidate must fill out the appropriate application blank to be obtained from the Secretary, and file it with the Barnard College Committee on Admissions by September 1, 1919, for admission in September, or by January 1, 1920, for admission in February. She must also present *at that time* (1) an official statement of her academic record including entrance credits, (2) an honorable dismissal from the college which she is leaving, (3) a marked catalogue of that college plainly showing every requirement for admission and every course of instruction with which she is credited, (4) a certificate signed by an authorized representative of that college testifying to her possession of a good moral character, and (5) a certificate of sound health.

Every candidate for admission to advanced standing must show that she has attained proficiency in the equivalent of (1) the requirements for admission to the freshman class (see page 18); (2) all the prescribed studies already pur-

sued by the class to which she seeks admission; (3) as many elective studies as she would have pursued if she had entered the class at the beginning of the freshman year.

She may be admitted notwithstanding deficiencies in some of these studies, but will not be recommended for a degree until she shall have brought all her studies up to the point required for that degree.

The credits granted in any subject to a student admitted with advanced standing may be withdrawn or diminished in amount, if, in pursuing such subject after admission to Barnard College, the student prove that the granting of the credits was wholly or in part unwarranted by her previous work.

No applicant may enter the senior class as a candidate for a degree after October 15 in any year, and no student will receive a degree who has resided less than two full sessions (winter or spring) at Barnard College. (See also paragraph 10, page 57.)

Candidates for admission to the freshman class offering by examination more than the required 15 units may be given credit toward a degree for this extra work, on a basis to be determined by the Committee on Admissions, provided that not more than 18 of the 124 points required for a degree may be gained in this way.

ADMISSION AS SPECIAL STUDENTS

A candidate for admission as a special student must fill out the appropriate application blank to be obtained from the Secretary and file it with the Committee on Admissions by September 1, 1919, for admission in September, or by January 1, 1920, for admission in February.

Special students in Barnard College are of two classes: matriculated and non-matriculated.

Matriculated Special Students.—Matriculated special students are women who wish, without taking a degree, to make a serious study of some subject or group of subjects. They must pass the regular examinations for admission to the freshman class and have full credit for fifteen units of the entrance requirements. (See p. 18.) They may, therefore, in event of a change of plan, be credited with such of their courses as may coincide with the courses leading to a degree.

Non-Matriculated Special Students.—Non-matriculated special students must be women of mature age who wish to pursue chiefly advanced courses of special study. They may be admitted at the discretion of the Committee on Admissions without passing formal entrance examinations; but they must furnish proof that they have at some time pursued the studies included in the matriculation examinations and must satisfy the requirements of the department that they desire to enter. *Candidates desiring to pursue merely elementary courses, as in languages, etc., will not be admitted as non-matriculated special students.*

Ordinarily no work done by a non-matriculated special student may count toward a degree.

Except for reasons of weight, satisfactory to the Committee on Admissions, no one will be received as a special student who is less than eighteen years of age,

or who has, within ten months of the time of her application, either been rejected or become deficient as a regular student.

Once admitted to the College, special students will be allowed to select their own courses of study subject to the general approval of the Provost, on the recommendation of the Committee on Instruction, and to the particular approval for each course selected, of the head of the department in which the course is given. They are subject to the same regulations in regard to health and physical training as other students. (See p. 75.)

Each student is required to pursue in each winter or spring session courses amounting to at least eight points, unless excused by the Provost, on the recommendation of the Committee on Instruction, for reasons of special weight.

In the courses which they severally pursue all special students will be held to the observance of the same regulations as to attendance, examination, proficiency, and deficiency as regular students.

All special students will receive a formal statement as to the satisfactory completion of the work that they have taken.

DEFINITIONS OF REQUIREMENTS ¹

Specimens of the question papers set by Columbia University may be obtained from the Secretary upon application. The question papers of the College Entrance Examination Board are published annually in book form by Ginn & Company, Boston, Mass.

For a more detailed statement of the requirements in botany and physiography or lists of suitable laboratory experiments in chemistry and physics the reader is referred to the pamphlet of the College Entrance Examination Board containing definitions of the requirements in each subject.

BOTANY (counting one unit)

The candidate should have received training by means of the laboratory method in:

The structure and the more obvious features of the life history of at least ten types among the higher seed plants chosen from the more representative families (*e. g.*, Gramineæ, Liliaceæ, Salicaceæ, Ranunculaceæ, Rosaceæ, Leguminosæ, Cruciferae, Solanaceæ, Labiatae, Compositae). In addition to these, the following types are recommended among the remaining lower groups of plants: pine, *Selaginella*, a fern, a moss (*Polytrichum* or *Funaria*), a leafy hepatic, *Marchantia*, a mildew (*Microsphaera*), an agaric, *Vaucheria*, *Spirogyra*, and a protophyte (preferably *Sphaerella*).

Morphology of shoot, root, and seed. This work covers the growth, character, relation, and function of the more important tissues of the stem, leaf, bud, and root together with a study of the more common variations of these organs. The work on the seed includes the structure and homologies of the principal types, nature of reserve food, the renewal of growth of the seed, and the development of the seedling.

Physiology. This work should cover the essential facts concerning irritability, photosynthesis, respiration, digestion, growth, and reproduction.

Ecology. The natural history of plants should receive considerable attention, and the behavior of plants toward environmental factors (especially light and moisture), dissemination, cross and close pollination, and the more important

¹ The relative value of subjects is expressed in units according to the time required for adequate preparation in them; a unit in the sense here used represents a course of five periods weekly throughout an academic year of the preparatory school.

structural and physiological characteristics of plant formations (hydrophytes, halophytes, mesophytes, and xerophytes) should be included.

A teacher's certificate of laboratory work must be presented. (See page 52). *The candidate must be prepared to submit an indexed note-book of her laboratory work in case the rest of her record in the subject, including the certificate, is not fully satisfactory.*

CHEMISTRY (counting one unit)

(For Comprehensive Examination, see page 50)

The candidate's preparation in chemistry should include:

a. The study of a standard text-book to the end that the pupil may gain a comprehensive and connected view of the most important facts and laws of elementary chemistry.

b. Instruction by lecture-table demonstrations, to be used mainly as a basis for questioning upon the general principles involved in the pupil's laboratory investigations.

c. Individual laboratory work, comprising at least forty exercises.

A teacher's certificate of laboratory work must be presented. (See page 52.) *The candidate must be prepared to submit an indexed note-book of her laboratory work in case the rest of her record in the subject, including the certificate, is not fully satisfactory.*

The following outline includes only the indispensable things which must be studied in the classroom and laboratory. The material is, for the most part, common to all elementary text-books and laboratory manuals. The order of presentation will naturally be determined by each teacher for himself.

Outline—The chief physical and chemical characteristics, the preparation and the recognition of the following elements together with their principal compounds: *oxygen, hydrogen, carbon, nitrogen, chlorine, bromine, iodine, fluorine, sulphur*, phosphorus, silicon, potassium, *sodium*, calcium, magnesium, *zinc*, copper, mercury, silver, aluminum, *lead*, tin, *iron*, manganese, chromium.

More detailed study should be confined to the italicized *elements* (as such) and to a restricted list of compounds such as: water, hydrochloric acid, carbon-monoxide, carbon-dioxide, oxides of nitrogen, nitric acid, ammonia, sulphur-dioxide, sulphuric acid, hydrogen sulphide, sodium-hydroxide, ammonium-hydroxide.

Attention should be given to the atmosphere (constitution and relation to animal and vegetable life), flames, acids, bases, salts, oxidation and reduction, crystallization, combining proportions by weight and volume, calculations founded on these and Boyle's and Charles's laws, symbols and nomenclature, atomic and ionization theory, atomic weights, valency (in a very elementary way), nascent state, natural grouping of the elements, solution (solvents and solubility of gases and solids and liquids, saturation), strength of acids and bases, conservation and dissipation of energy, chemical energy, electrolysis. Chemical terms should be clearly understood, and the pupil should be able to illustrate and apply the ideas they embody. The theoretical topics are not intended to form separate subjects of study, but to be taught only so far as is necessary for the correlation and explanation of the experimental facts.

DRAWING (counting one unit)

The candidate's preparation in drawing should be directed toward training her in accurate observation and in definite and truthful representation of form, without attempt to represent color or color values.

The candidate should be able to draw correctly and with lines of good quality simple forms in correct perspective in the size in which they are felt in the plane of the drawing, or larger or smaller. It is recommended that pupils should be taught to draw from the object itself rather than from the flat.

The elementary principles of perspective are to be thoroughly learned, and the candidate should be able to apply them in freehand drawing from the object or from the imagination.

No definite prescription as to method of teaching is made. The examination will test the preparation of the candidate in the following points:

1. Ability to sketch from the object with reasonable correctness as to proportion, structure, and form. It is recommended that the subjects drawn include simple geometrical objects and simple natural objects such as living plant forms.

2. Ability to sketch freehand from dictation with reasonable accuracy any simple geometrical figure or combination of figures.

3. Ability to represent accurately in perspective a simple geometrical solid of which projection drawings are given, and ability to make consistent projection drawings of a simple geometrical solid of which a perspective representation is given.

4. Ability to answer questions in regard to the principles involved in making these drawings.

Each candidate must present a teacher's certificate for the drawings executed. (See page 52.) *The candidate must be prepared to submit a set of twenty drawings, displaying proficiency in the points mentioned above, in case the rest of her record in the subject is not fully satisfactory.*

Correctness of proportion and accuracy in the angles and curves and structural relations of the parts of every figure or object drawn are of the highest importance, and in laying out the drawings great care should be taken in the use of construction lines, and in the drawing of general masses and contour before the details are begun.

A certain proportion of shade drawings from casts may be included, but they are not required and should not form the majority of the drawings. If drawings are submitted, they should be of uniform size, and fastened together, not rolled.

ENGLISH

Elementary (counting three units)

(For Comprehensive Examination, see page 50)

Requirement for 1919

The entrance examinations in English are given upon the plan recommended by the National Conference on Uniform Entrance Requirements in English, and adopted by the College Entrance Examination Board. Under this plan candidates are examined separately in (1) Grammar and Composition, and (2) Literature, each examination counting as 1½ units.

Objects of Study.—The study of English in school has two main objects: (1) Command of correct and clear English, spoken and written; (2) ability to read with accuracy, intelligence, and appreciation.

1. **Grammar and Composition.**—The first object requires instruction in grammar and composition. English grammar should ordinarily be reviewed in the secondary school; and correct spelling and grammatical accuracy should be rigorously exacted in connection with all written work during the four years. The principles of English composition governing punctuation, the use of words,

sentences, and paragraphs should be thoroughly mastered; and practice in composition, oral as well as written, should extend throughout the secondary school period. Written exercises may well comprise letter-writing, narration, description, and easy exposition and argument. It is advisable that subjects for this work be taken from the student's personal experience, general knowledge, and studies other than English, as well as from her reading in literature. Finally, special instruction in language and composition should be accompanied by the concerted effort of teachers in all branches to cultivate in the student the habit of using good English in her recitations and various exercises, whether oral or written.

2. **Literature.**—The second object is sought by means of two lists of books, headed respectively *Reading* and *Study*, from which may be framed a progressive course in literature covering four years. In connection with both lists, the student should be trained in reading aloud and be encouraged to commit to memory some of the more notable passages both in verse and in prose. As an aid to literary appreciation, she is further advised to acquaint herself with the most important facts in the lives of the authors whose works she reads and with their place in literary history.

(a) **Reading.**—The aim of this course is to foster in the student the habit of intelligent reading and to develop a taste for good literature, by giving her a first-hand knowledge of some of its best specimens. She should read the books carefully, but her attention should not be so fixed upon details that she fails to appreciate the main purpose and charm of what she reads.

With a view to large freedom of choice, the books provided for reading are arranged in the following groups, from each of which at least two selections are to be made, except as otherwise provided under Group I:

GROUP I (Classics in Translation). The *Old Testament*, comprising at least the chief narrative episodes in *Genesis*, *Exodus*, *Joshua*, *Judges*, *Samuel*, *Kings*, and *Daniel*, together with the books of *Ruth* and *Esther*; the *Odyssey*, with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; the *Iliad*, with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI; the *Aeneid*. The *Odyssey*, *Iliad*, and *Aeneid* should be read in English translations of recognized literary excellence.

(For any selection from this group a selection from any other group may be substituted.)

GROUP II (Shakespeare). *Midsummer Night's Dream*, *Merchant of Venice*, *As You Like It*, *Twelfth Night*, *The Tempest*, *Romeo and Juliet*, *King John*, *Richard II*, *Richard III*, *Henry V*, *Coriolanus*, *Julius Caesar*, *Macbeth*, *Hamlet*. (No one of the last three may be taken if chosen for study under b.)

GROUP III (Prose Fiction). Malory, *Morte d'Arthur* (about 100 pages); Bunyan, *Pilgrim's Progress*, Part I; Swift, *Gulliver's Travels* (voyages to Lilliput and to Brobdingnag); Defoe, *Robinson Crusoe*, Part I; Goldsmith, *Vicar of Wakefield*; Frances Burney, *Evelina*; Scott's Novels, any one; Jane Austen's Novels, any one; Maria Edgeworth, *Castle Rackrent*, or *The Absentee*; Dickens's Novels, any one; Thackeray's Novels, any one; George Eliot's Novels, any one; Mrs. Gaskell, *Cranford*; Kingsley, *Westward Hol* or *Hereward the Wake*; Reade, *The Cloister and the Hearth*; Blackmore, *Lorna Doone*; Hughes, *Tom Brown's School Days*; Stevenson, *Treasure Island*, or *Kidnapped*, or *Master of Ballantrae*; Cooper's Novels, any one; Poe, *Selected Tales*; Hawthorne, *The House of the Seven Gables*, or *Twice Told Tales*, or *Mosses from an Old Manse*; a collection of *Short Stories* by various standard writers.

GROUP IV (Essays, Biography, etc.). Addison and Steele, *The Sir Roger de Coverley Papers*, or selections from the *Tatler* and *Spectator* (about 200 pages); Boswell, selections from the *Life of Johnson* (about 200 pages); Franklin, *Autobiography*; Irving, selections from the *Sketch Book* (about 200 pages), or *Life of Goldsmith*; Southey, *Life of Nelson*; Lamb, selections from the *Essays of Elia* (about 100 pages); Lockhart, selections from the *Life of Scott* (about 200 pages); Thackeray, lectures on Swift, Addison, and Steele, in the *English Humorists*; Macaulay, any one of the following essays: *Lord Clive*, *Warren Hastings*, *Milton*, *Addison*, *Goldsmith*, *Frederick the Great*, *Madame d'Arblay*; selections from the *Life of Macaulay* (about 200 pages); Ruskin, *Sesame and Lilies*, or *Selections* (about 150 pages); Dana, *Two Years Before the Mast*; Lincoln, selections, including at least the two *Inaugurals*, the *Speeches in Independence Hall* and at *Gettysburg*, the *Last Public Address*, the *Letter to Horace Greeley*, together with a brief memoir or estimate of Lincoln; Parkman, *The Oregon Trail*; Thoreau, *Walden*; Lowell, *Selected Essays* (about 150 pages); Holmes, *The Autocrat of the Breakfast Table*; Stevenson, *An Inland Voyage* and *Travels with a Donkey*; Huxley, *Autobiography* and selections from *Lay Sermons*, including the addresses on *Improving Natural Knowledge*, *A Liberal Education*, and *A Piece of Chalk*; a collection of *Essays* by Bacon, Lamb, De Quincey, Hazlitt, Emerson, and later writers; a collection of *Letters* by various standard writers.

GROUP V (Poetry). Palgrave's *Golden Treasury* (First Series), Books II and III, with special attention to Dryden, Collins, Gray, Cowper, and Burns; Palgrave's *Golden Treasury* (First Series).

Book IV, with special attention to Wordsworth, Keats, and Shelley (if not chosen for study under b); Goldsmith, *The Traveller* and *The Deserted Village*; Pope, *The Rape of the Lock*; a collection of English and Scottish Ballads, as, for example, some Robin Hood ballads, *The Battle of Otterburn*, *King Estmere*, *Young Beichan*, *Bewick and Grahame*, *Sir Patrick Spens*, and a selection from later ballads; Coleridge, *The Ancient Mariner*, *Christabel* and *Kubla Khan*; Byron, *Childe Harold*, Canto III or IV, and *The Prisoner of Chillon*; Scott, *The Lady of the Lake*, or *Marmion*; Macaulay, *The Lays of Ancient Rome*, *The Battle of Naseby*, *The Armada*, *Ivry*; Tennyson, *The Princess*, or *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur*; Browning, *Cavalier Tunes*, *The Lost Leader*, *How They Brought the Good News from Ghent to Aix*, *Home Thoughts from Abroad*, *Home Thoughts from the Sea*, *Incident of the French Camp*, *Hervé Riel*, *Pheidippides*, *My Last Duchess*, *Up at a Villa—Down in the City*, *The Italian in England*, *The Patriot*, 'De Gustibus —', *The Pied Piper*, *Instans Tyrannus*; Arnold, *Sohrab and Rustum*, and *The Forsaken Merman*; selections from *American Poetry*, with special attention to Poe, Lowell, Longfellow, and Whittier.

(b) **Study.**—This part of the requirement is intended as a natural and logical continuation of the student's earlier reading, with greater stress laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. The books provided for study are arranged in four groups, from each of which one selection is to be made.

GROUP I (Drama). Shakespeare, *Julius Cæsar*, or *Macbeth*, or *Hamlet*.

GROUP II (Poetry). Milton, *L'Allegro*, *Il Penseroso*, and either *Comus* or *Lycidas*; Tennyson, *The Coming of Arthur*, *The Holy Grail*, and *The Passing of Arthur*; the selections from Wordsworth, Keats, and Shelley in Book IV of Palgrave's *Golden Treasury* (First Series).

GROUP III (Oratory). Burke, *Speech on Conciliation with America*; Macaulay's two *Speeches on Copyright* and *Lincoln's Speech at Cooper Union*; Washington's *Farewell Address* and Webster's *First Bunker Hill Oration*.

GROUP IV (Essays). Carlyle, *Essay on Burns*, with a selection from Burns's *Poems*; Macaulay, *Life of Johnson*; Emerson, *Essay on Manners*.

Examination.—However accurate in subject-matter, no paper will be considered satisfactory if seriously defective in punctuation, spelling, or other essentials of good usage.

The examination will be divided into two parts.

1. **Grammar and Composition.**—In grammar and composition, the candidate may be asked specific questions upon the practical essentials of these studies, such as the relation of the various parts of a sentence to one another, the construction of individual words in a sentence of reasonable difficulty, and those good usages of modern English which one should know in distinction from current errors. The main test in composition will consist of one or more essays, developing a theme through several paragraphs; the subjects will be drawn from the books read, from the candidate's other studies, and from her personal knowledge and experience quite apart from reading. For this purpose the examiner will provide several subjects, perhaps eight or ten, from which the candidate may make her own selections. She will not be expected to write more than four hundred words per hour.

2. **Literature.**—The examination in literature will include:

(a) General questions designed to test such a knowledge and appreciation of literature as may be gained by fulfilling the requirements defined under (a) **Reading**, above. The candidate will be required to submit a list of the books read in preparation for the examination, certified by the principal of the school in which she was prepared; but this list will not be made the basis of detailed questions. This certified list must be submitted at or before the opening of the examination in English 2. Blank forms for certification may be secured from the Secretary.

(b) A test on the books prescribed for study, which will consist of questions upon their content, form, and structure, and upon the meaning of such words, phrases, and allusions as may be necessary to an understanding of the works and an appreciation of their salient qualities of style. General questions may also be asked concerning the lives of the authors, their other works, and the periods of literary history to which they belong.

Essays written during the candidate's high-school course in English, and properly certified, may be submitted in connection with the Columbia University

examination in English 2 in January and September; but the submission of such essays will not exempt the candidate from examination in this subject. (See Note-books, page 53.)

Requirement for 1920-1922

The study of English in school has two main objects, which should be considered of equal importance: (i) command of correct and clear English, spoken and written; (ii) ability to read with accuracy, intelligence, and appreciation, and the development of the habit of reading good literature with enjoyment.

Grammar and Composition.—Identical with the requirement for 1919.

Literature.—The second object is sought by means of the reading and study of a number of books from which may be framed a progressive course in literature. The student should be trained in reading aloud and should be encouraged to commit to memory notable passages both in verse and in prose. As an aid to literary appreciation, she is further advised to acquaint herself with the most important facts in the lives of the authors whose works she reads and with their place in literary history. She should read the books carefully, but her attention should not be so fixed upon details that she fails to appreciate the main purpose and charm of what she reads.

A few of these books should be read with special care, greater stress being laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions.

Examination, 1920-1922

Candidates will have the option of taking either of two examinations: (i) Comprehensive; (ii) Restricted. The comprehensive examination is described on page 50. The following statements apply to the restricted examination.

However accurate in subject-matter, no paper will be considered satisfactory if seriously defective in punctuation, spelling, or other essentials of good usage.

Grammar and Composition.—In grammar and composition, the candidate may be asked specific questions upon the practical essentials of these studies, such as the relation of the various parts of a sentence to one another, and those good usages of modern English which one should know in distinction from current errors. The main test in composition will consist of one or more essays developing a theme through several paragraphs; the subjects will be drawn from the books read, from the candidate's other studies, and from her personal knowledge and experience quite apart from reading. For this purpose the examiner will provide several subjects, perhaps eight or ten, from which the candidate may make her own selections. She will not be expected to write more than 400 words an hour.

Literature.—The examination will include:

A. Questions designed to test such knowledge and appreciation of literature as may be gained by an intelligent reading of the books given in List *A* below.

B. A test on the books in List *B* below. This will consist of questions upon their content, form, and structure, and upon the meaning of such words, phrases, and allusions as may be necessary to an understanding of the works and an appreciation of their salient qualities of style. General questions may also be asked concerning the lives of the authors, their other works, and the periods of literary history to which they belong.

Division of Examination.—When parts *A* and *B* of the examination are taken at different times, each will include a test in grammar and composition.

List of Books, 1920-1922

A. Books for Reading.—The books provided for reading are arranged in the following groups, from each of which at least two selections are to be made, except that for any book in Group I a book from any other may be substituted.

GROUP I (Classics in Translation). The *Old Testament*, at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the *Odyssey*, with the omission, if desired, of Books I-V, XV, and XVI; the *Aeneid*. The *Odyssey* and the *Aeneid* should be read in English translations of recognized literary excellence.

GROUP II (Drama). Shakespeare, *Merchant of Venice*, *As You Like It*, *Julius Caesar*.

GROUP III (Prose Fiction). Dickens, *A Tale of Two Cities*; George Eliot, *Silas Marner*; Scott, *Quentin Durward*; Hawthorne, *The House of the Seven Gables*.

GROUP IV (Essays, Biography, Etc.). Addison and Steele, *The Sir Roger de Coverley Papers*; Irving, *The Sketch Book*—selections covering about 175 pages; Macaulay, *Lord Clive*; Parkman, *The Oregon Trail*.

GROUP V (Poetry). Tennyson, *The Coming of Arthur*, *Gareth and Lynette*, *Lancelot and Elaine*, *The Passing of Arthur*; Browning, *Cavalier Tunes*, *The Lost Leader*, *How they Brought the Good News from Ghent to Aix*, *Home Thoughts from Abroad*, *Home Thoughts from the Sea*, *Incident of the French Camp*, *Hervé Riel*, *Pheidippides*, *My Last Duchess*, *Up at a Villa—Down in the City*, *The Italian in England*, *The Patriot*, *The Pied Piper*, 'De Gustibus—', *Instans Tyrannus*; Scott, *The Lady of the Lake*; Coleridge, *The Ancient Mariner*, and Arnold, *Sohrab and Rustum*.

B. Books for Study.—The books provided for study are arranged in four groups, from each of which one selection is to be made.

GROUP I (Drama). Shakespeare: *Macbeth* or *Hamlet*.

GROUP II (Poetry). Milton, *L'Allegro*, *Il Penseroso*, *Comus*; Book IV of Palgrave's *Golden Treasury* (First Series), with special attention to Wordsworth, Keats, and Shelley.

GROUP III (Oratory). Burke, *Speech on Conciliation with America*; Washington's *Farewell Address*; Webster's *First Bunker Hill Oration*; and Lincoln's *Gettysburg Address*.

GROUP IV (Essays). Macaulay, *Life of Johnson*; Carlyle, *Essay on Burns*, with a brief selection from Burns's *Poems*.

Advanced (counting one unit)

Candidates should have had substantially the same training as that prescribed for freshmen under English A1-A2. They will be examined in the principles of effective organization and expression as set forth in any good text-book of rhetoric and as exemplified in the following works prescribed for reading: Two of the essays of William Hazlitt, and two of Lamb's *Essays of Elia*, Carlyle's *Past and Present*, Newman's *Literature*, about one-fourth of Holmes's *Autocrat of the Breakfast Table*, Lincoln's *Debate with Douglas at Alton*, Arnold's *Sweetness and Light*, Mill's *Subjection of Women*, Huxley's *A Piece of Chalk*, Lowell's *Democracy*, a good English or American novel written since 1880, a good modern play in English, and two short stories by each of the following authors: Hawthorne, Poe, Stevenson, and Kipling. The examination will test a candidate's grasp of expository, argumentative, descriptive, and narrative methods, and will call for specific comment and comparison on points of style.

At least two weeks before the examinations begin each candidate must have filed with the Secretary of the College the following manuscripts duly certified (see Note-books, page 53): two essays of about 1,000 words each, or four essays of about 500 words each, on topics related to the prescribed reading; two essays of about 1,000 words each on topics not related to the prescribed reading; one consecutive argument of at least 1,000 words; one piece of narrative, at least 1,000 words, or short descriptions in number sufficient to make up at least the same amount.

• FRENCH

(For Comprehensive Examination, see page 51)

NOTE.—The entrance examinations in Elementary and Intermediate French will include an Elementary Aural Test to be designated as French *x* supplementary to the present examination which is designated French *a*, and an Intermediate Aural to be designated as French *y* supplementary to the present examination which is designated *b*. The candidates in *x* and *y* will be examined in groups of not more than seventy-five in order that the examiner may be heard without difficulty.

These tests will be given in June at Columbia University as well as in September and January.

a. Elementary (counting two units)

To secure credit for Elementary French, candidates will be required to offer both *a* and *x*. Those who pass *a* but do not pass *x* will not be required to repeat the examination in *a*. Those who fail in *a*, however, must repeat also the examination in *x*. No part of the two units will be credited until both *a* and *x* shall have been passed.

x. Aural test: (1) Writing easy French prose from dictation; (2) writing in English the content of a short 'unseen' passage of easy French prose read aloud by the examiner; (3) writing in French answers to easy oral questions in French on a short connected passage read by the candidates immediately before the questions are asked.

Candidates who pursue the study of French after admission to college will be subjected to an individual test in reading and pronunciation, but credit for admission will not depend upon such test.

a. Grammar, Reading, and Elementary Prose Composition: (1) The rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural of nouns, the inflection of adjectives, participles, and pronouns; the use of personal pronouns, common adverbs, prepositions and conjunctions; the order of words in the sentence, and the elementary rules of syntax; (2) translation at sight into English of easy dialogue or narrative prose; (3) translation into French of easy detached sentences from the language of every-day life illustrative of elementary grammatical principles and of simple idioms.

The Aim of the Instruction.—At the end of the elementary course the pupil should be able to pronounce French accurately, to read at sight easy French prose, to put into French simple English sentences taken from the language of every-day life, or based upon a portion of the French text read, and to answer questions on the rudiments of the grammar, as defined below.

The Work to be Done.—During the first year the work should comprise: (1) careful drill in pronunciation; (2) the rudiments of grammar as outlined in *a*, above; (3) abundant easy exercises, designed not only to fix in the memory the forms and principles of grammar but also to cultivate readiness in the reproduction of natural forms of expression; (4) the reading of from 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentences read (the teacher giving the English), and in reproducing from memory sentences previously read; (5) writing French from dictation.

During the second year the work should comprise: (1) the reading of from 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographical sketches; (2) constant practice, as in the previous year, in translating into French easy variations upon the texts read; (3) frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; (4) writing French from dictation; (5) continued drill upon the rudiments of grammar, with constant application in the construction of sentences; (6) mastery of the forms and use of pronouns, pronominal adjectives, of all but the rare irregular verb forms, and of the simpler uses of the conditional and subjunctive.

Suitable texts for the second year are: Daudet, *Le Petit Chose*; Erckmann-Chatrian, stories; Halévy, *L'Abbé Constantin*; Labiche et Martin, *Le voyage de M. Perrichon*; Lavissee, *Histoire de France*.

b. Intermediate (counting one unit)

To secure credit for Intermediate French, candidates will be required to offer both *b* and *y*. The regulations governing examinations and credit are the same as those stated for Elementary French.

y. Aural Test: (1) Writing moderately difficult French from dictation; (2) writing in French the content of an 'unseen' passage of ordinary narrative prose, read aloud by the examiner; (3) writing in French answers to oral questions, in French, on a connected passage read aloud by the examiner.

b. Grammar, Reading, and Intermediate Prose Composition: (1) The principles of French grammar in their application to ordinary prose; (2) interpretation by means of paraphrase, synonymy, or translation into English of moderately difficult prose or poetry, recent or classical; (3) translation into French of easy connected prose or the original composition in French of a simple passage.

The Aim of the Instruction.—At the end of the intermediate course the pupil should be able to read at sight ordinary French prose or simple poetry, to translate into French a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

The Work to be Done.—This should comprise the reading of from 400 to 600 pages of French of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving French paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

Suitable texts for the third year are: Bazin, *Les Oberlé*; Dumas, novels; Merimée, *Colomba*; Sandeau, *Mlle. de la Seiglière*; Tocqueville, *Voyage en Amérique*.

c. Advanced

The Aim of the Instruction.—At the end of the advanced course the pupil should be able to read at sight, with the help of a vocabulary of special or technical expressions, difficult French not earlier than that of the seventeenth century; to write in French a short essay on some simple subject connected with the works read; to put into French a passage of easy English prose; and to carry on a simple conversation in French.

The Work to be Done.—This should comprise the reading of from 600 to 1,000 pages of standard French, classical and modern, only difficult passages being explained in the class; the writing of numerous short themes in French; the study of syntax.

Suitable texts for the fourth year are: Dumas fils, *La question d'argent*; Hugo, *Quatre-vingt treize*, *Les misérables*; Loti, *Pêcheur d'Islande*; Taine, *L'Ancien régime*; Vigny, *Cinq-Mars*; an anthology of verse.

GERMAN

(For Comprehensive Examination, see page 51)

NOTE.—The entrance examinations in Elementary and Intermediate German will include an Elementary Aural Test to be designated as German *x* supplementary to the present examination which is designated German *a*, and an Intermediate Aural to be designated German *y* supplementary to the present examination which is designated *b*. The candidates in *x* and *y* will be examined in groups of not more than seventy-five in order that the examiner may be heard without difficulty.

These tests will be given in June at Columbia University as well as in September and January.

a. Elementary (counting two units)

To secure credit for Elementary German, candidates will be required to offer both *a* and *x*. Those who pass *a* but do not pass *x* will not be required to repeat the examination in *a*. Those who fail in *a*, however, must repeat also the examination in *x*. No part of the two units will be credited until both *a* and *x* shall have been passed.

x. Aural Test: (1) Writing easy German prose from dictation; (2) writing in English the content of a short 'unseen' passage of easy German prose read aloud by the examiner; (3) writing in German answers to easy oral questions in German on a short connected passage read by the candidates immediately before the questions are asked.

Candidates who pursue the study of German after admission to college will be subjected to an individual test in reading and pronunciation, but credit for admission will not depend upon such test.

a. Grammar, Reading, and Elementary Prose Composition: (1) The rudiments of grammar, including the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word-order; (2) translation at sight into English of easy dialogue or narrative prose; (3) translation into German of easy detached sentences from the language of every-day life illustrative of elementary grammatical principles and of simple idioms.

Aim of the Instruction.—During the elementary course in German pupils should be taught to read and to understand, when read to them, easy prose. They should also receive systematic training in the oral and written use of the foreign language and be able to turn short, easy English sentences into German.

During the first year the work should comprise: (1) Careful drill in pronunciation. Especial attention should be given at all times to reading aloud and to work in dictation. (2) Systematic study of the essentials of grammar should be begun. Abundant oral and written exercises, definitely planned to enable pupils to use the various parts of speech in sentence form, should always supplement the learning of paradigms and rules. (3) A small amount (40–50 pages) of prepared reading of such a character as to lend itself easily to question and answer work and to other kinds of oral and written exercises in the foreign language. Very easy sight-reading should supplement the prepared work. If translation from the mother tongue is used the first year, the exercises should be limited to easy variations of language material that the pupils have well in hand through previous careful study.

During the second year the essentials of grammar should be completed. Greater emphasis should be given during this year to reading. Some of the easy texts should be read rather rapidly, with sufficient practice in translating into English and partly at sight; others, in whole or in part, should be made the basis of oral and written exercises to increase the pupils' power in the use of the foreign language. Simple dictation and exercises in translating orally and in writing from the mother tongue should regularly accompany the intensive study of the text. This work should be supplemented by reproduction, first in English, later in simple German, of the content of short, easy 'unseen' passages read aloud by the teacher. The prepared reading in the second year should not exceed 125 pages; at least fifty pages should be read at sight.

Suitable texts for the elementary course, after 40–50 pages of very simple reading matter in a beginners' book or elementary reader, are: Andersen's *Märchen*; selections from Baumbach's short stories; Schmid's *Heinrich von Eichenfels*; Volkmann-Leander's *Kleine Geschichten*; one-act plays (such as those of Benedix);

selections from Hauff's *Märchen*; Blüthgen's *Das Peterle von Nürnberg*. Especially suited for girls' classes are: Andersen's *Bilderbuch ohne Bilder*; Volkmann-Leander's *Träumereien*; Hillern's *Höher als die Kirche*; Gerstäcker's *Germelshausen*.

Very easy prose texts *not used for assigned work* should be read at sight. Suitable for this purpose are: Selections from Grimm's *Märchen*, Goebel's *Rübezahl*, *Die Schildbürger*, and *Till Eulenspiegel*.

b. Intermediate (counting one unit)

To secure credit for intermediate German, candidates will be required to offer both *b* and *y*. The regulations governing examinations and credit are the same as those stated for Elementary German.

a. Aural Test: (1) Writing moderately difficult German from dictation; (2) writing in German the content of an 'unseen' passage of ordinary narrative prose, read aloud by the examiner; (3) writing in German answers to oral questions, in German, on a connected passage read aloud by the examiner.

b. Grammar, Reading, and Intermediate Prose Composition: (1) The principles of German grammar in their application to ordinary prose, including syntax, word-order, word-formation, and indirect discourse; (2) interpretation by means of paraphrase, synonymy, or translation into English of moderately difficult prose or poetry, recent or classical; (3) translation into German of easy connected prose or the original composition in German of a simple passage.

Aim of the Instruction.—The aim of the intermediate course is to increase the pupils' power to read and control the foreign language. The various oral and written exercises and the sight-reading practice of the second year should be continued. In oral reading attention should be given to intonation and sentence stress as well as to correctness of pronunciation.

At the end of the course pupils should be able to read at sight selections of modern German prose or poetry not too difficult either in thought or form; to understand and reproduce in German short, easy selections read to them; to turn into German connected English prose, simple as to form and vocabulary. They should not only have a working knowledge of grammar, but also be able, if called upon, to state clearly and accurately the essential rules.

The reading (350–400 pages) should largely be confined to writers of the modern period. Some of the texts chosen should be read as quickly as is possible consistent with careful work; others should be studied more intensively for both the language and the thought.

Suitable texts for the intermediate course:

(A) For mixed classes: 1. Narrative prose—Storm, *Immensee*; Gerstäcker, *Irrefahrten*; Zschokke, *Das Abenteuer der Neujahrsnacht*; Baumbach, *Das Habichtsfräulein*, or *Der Schwiegersohn*; Arnold, *Fritz auf Ferien*; Ebner-Eschenbach, *Krambambuli*; Riehl, *Der stumme Ratsherr*; Schücking, *Die drei Freier*; Keller, *Kleider machen Leute*; Raabe, *Die schwarze Galeere*; Otto Ernst, *Asmus Sempers Jugendland*.

2. Plays—Moser, *Der Bibliothekar*; Fulda, *Unter vier Augen*; Freytag, *Die Journalisten*; Fulda, *Der Talisman*, or *Das verlorene Paradies*; Schiller, *Wilhelm Tell*¹.

¹ In schools with a four-years' course, *Wilhelm Tell* should be reserved for the last year. For the benefit of schools with a three-years' course, several works listed under Advanced German are indicated (marked *) as suitable for use at the end of the third year.

(B) Especially suited for girls' classes: Seidel, *Leberecht Hühnchen*; Rosegger, *Das Holzknechtshaus*; Fouqué, *Undine*; Jensen, *Die braune Erica*; Auerbach, *Brigitta*; Storm, *Pole Poppenspüler*.

For oral drill and colloquial practice, a book dealing with German life, customs and institutions and written in the simplest conversational German should be used.

A liberal amount of reading at sight should be done, using texts not otherwise studied and easier than the regular class texts.

c. Advanced

The Examination in advanced German is similar in form to that in Intermediate German (b), with the requirement that the candidate be able to interpret at sight any modern German prose or verse involving no technical vocabulary, and to write an original theme with reasonable fluency and correctness. An aural test is not required in Advanced German. Candidates offering Intermediate and Advanced German (bc) must take the intermediate aural test (y).

The Work to be Done in the advanced course differs from that in the preceding courses only in amount and degree. The copious reading of numerous modern texts and the intensive study of a few masterpieces selected from the classic and the modern period (in all not less than 500 pages) should occupy the major portion of the time. In addition to the kinds of oral and written work done in the previous courses pupils should have some training in writing short independent themes on simple topics. Considerable attention should also be given to the study of vocabulary as to form and meaning.

Suitable texts for the advanced course:

(A) For mixed classes: 1. Classic drama (*one of these works should be studied intensively*): Schiller, *Wilhelm Tell*,* *Jungfrau von Orleans*, *Maria Stuart*; Lessing, *Minna von Barnhelm*; Goethe, *Egmont*.

2. Other plays: Grillparzer, *Die Ahnfrau*,* *Der Traum ein Leben*; Kleist, *Der Prinz von Homburg*; Wildenbruch, *Harold*; Otto Ernst, *Flachsmann als Erzieher*.

3. Narrative prose: Heine, *Die Harzreise*; Hauff, *Lichtenstein*,* Freytag, *Soll und Haben*; Sudermann, *Frau Sorge*,* Meyer, *Das Amulett*; Frenssen, *Jörn Uhl*; Fontane, *Grete Minde*.

4. Historical prose: Selections from Schiller, *Geschichte des Dreissigjährigen Krieges*, or from Freytag, *Bilder aus der deutschen Vergangenheit*.

5. A selection of German lyrics and ballads.

(B) Especially suited for girls' classes: Scheffel, *Der Trompeter von Säckingen*,* Riehl, *Burg Neideck*; Heyse, *Die Blinden*,* Hoffman, *Meister Martin der Küfer und seine Gesellen*; Freytag, *Die verlorene Handschrift*; Raabe, *Else von der Tanne*.

In general, texts should be read rapidly; but see last paragraph under elementary reading list. For colloquial practice specially prepared books dealing with modern life or historical and literary material are recommended.

GREEK

(For Comprehensive Examination, see page 51)

Elementary (counting two or three units)

NOTE.—To secure credit for two units in Greek, candidates must offer a, b, and g. To secure credit for three units they must offer a, b, c, f, and g.

a. i. **Grammar**.—The common forms, idioms, and constructions, and the general grammatical principles of Attic Greek prose.

ii. **Elementary Prose Composition.**—Translation into Greek of detached sentences to test the candidate's knowledge of grammatical constructions.

The examination in the two subjects immediately preceding will be based on the first two books of Xenophon's *Anabasis*.

b. Xenophon.—The first four books of the *Anabasis*.

c. Homer.—The first three books of the *Iliad* (omitting II, 494–end) and the constructions, poetical forms, and prosody of Homer's *Iliad*.

f. Prose Composition.—Translation into Greek of continuous prose based on Xenophon and other Attic prose of similar difficulty.

g. Sight Translation of Prose.—Translation into English at sight based on prose of no greater difficulty than Xenophon's *Anabasis*.

Examinations

A composite paper is offered from which those desiring to be examined in Greek *a* or in Greek *a*, *b*, and *g* or in Greek *c* and *f* or in the whole of Greek should select certain specified questions. Candidates taking the examinations in Greek given by the College Entrance Examination Board should take the *comprehensive* examination (see pages 21, 51).

Advanced (counting one unit)

Candidates offering Advanced Greek will be required to have covered substantially the same ground as that included under Greek 5, 6. In Homer, for which no equivalent will be accepted, the minimum requirement will be 1,200 lines in addition to the amount offered for the elementary examination. The candidate must also offer Plato's *Apology*, and Lucian, fifty pages in the Teubner text, and in prose composition at least fifteen exercises in Spieker's Greek Prose Composition. If candidates wish to offer equivalents for the portions of Plato or Lucian named above, they must designate them when they apply for examination in this subject.

HISTORY

Elementary

(For *Comprehensive Examination*, see page 51)

NOTE.—Each of the four divisions, *a*, *b*, *c*, and *d*, counts one unit.

Candidates may offer History *h* as a substitute for History *b*, History *f* as a substitute for History *c*, and History *g* as a substitute for History *d*.

a. Ancient History, including a brief introductory study of the Oriental peoples, and early medieval history to the death of Charlemagne, with due reference to art, literature, and government.

b. Medieval and Modern History, from the death of Charlemagne to the present time, with due reference to the growth of the state-system.

c. English History, with due reference to social and political development.

d. American History, with the elements of civil government.

f. Modern England, from the beginning of the sixteenth century, and the **British Empire**, including the history of the American Colonies.

g. United States History Since the Revolution, and American Government.

h. Modern European History, from the beginning of the sixteenth century to the present.

On examination a candidate must show such general knowledge of the subject in each division offered as may be acquired from the study of an accurate text-

book of not less than 300 pages. *Since the questions will be so framed as to require comparison and the use of judgment rather than mere exercise of memory on the part of the pupil, it is recommended* that the teacher prescribe a course of supplementary reading of not less than 300 pages, dealing with the more important periods and events in each division offered. Geographical knowledge will be tested by requiring the location of places, boundaries, and movements on an outline map.

Advanced (counting one unit)

Candidates offering Advanced History will be required to have performed work of the same kind, amount, and quality as that required for History A1-A2—the course prescribed in Barnard College. The work done at school, therefore, should be substantially identical with that course, the nature of which is explained in a syllabus that may be obtained at the University Bookstore. Those candidates who desire to offer history as an advanced subject must have offered for elementary history either *a* and *b*, or *c* and *d* (or equivalents in *h, f, g*), and must present themselves for examination upon the two divisions *which they did not offer as an elementary subject*. The examination will presuppose superior ability on the part of the candidate to understand the significance of historical events, movements, or tendencies, to discern similarities and contrasts, and to combine results. Especial care should be exercised, therefore, in the selection of the supplementary reading on the more important periods and events in each of the two divisions.

As further evidence of proficiency, satisfactory written work must be presented in the form of a note-book, or bound collection of notes (see Note-books, page 53), which must contain not less than 5,000 words on each division offered, and must show practice in at least three of the following exercises:

- (a) Notes and digests of reading outside of the text-books.
- (b) Written recitations requiring the use of judgment, and the application to new questions of knowledge already gained.
- (c) Written parallels between historical characters, events, or periods.
- (d) Brief studies of topics limited in scope, prepared outside the classroom and illustrated by some reference to contemporary material.
- (e) Historical maps or charts, showing explorations, migrations, conquests, territorial changes, or social phenomena.

ITALIAN

Elementary (counting two units)

NOTE.—The examination in this subject will include an Aural Test similar in character to that described under Elementary German.

The Aim of the Instruction.—At the end of the course the pupil should be able to pronounce Italian accurately, to read at sight easy Italian prose, to put into Italian simple English sentences taken from the language of every-day life, or based upon a portion of the Italian text read, and to answer correctly questions on the rudiments of the grammar, as defined below.

The Work to be Done.—During the first year the work should comprise: (1) careful drill in pronunciation; (2) the rudiments of grammar, including the conjugation of the regular and the more common irregular verbs, the inflection of nouns, adjectives, and pronouns, and the elementary rules of syntax; (3) abundant exercises illustrating the principles of grammar; (4) the reading and accurate rendering into good English of from 100 to 175 duodecimo pages of

graduated texts, with translation into Italian of easy variations of the sentences read; (5) writing Italian from dictation.

During the second year the work should comprise: (1) the reading of from 250 to 400 pages of modern prose from different authors and of easy poetry (2) practice in translating Italian into English, and English variations of the text into Italian; (3) continued study of the elements of grammar and of syntax; (4) mastery of all but the rare irregular verb-forms and of the simpler uses of the moods and tenses; (5) writing Italian from dictation.

Suitable texts for the second year are: E. de Amicis's *Cuore*; G. Giacosa's *Acquazzoni in montagna*; P. Zambri's *Il caporale di settimana*; G. Gozzi's *Poesie e prosce*, scelte da A. Pippi; G. C. Abba's *Da Quarto al Volturmo*; Guido Zatorsi's *Guardare e pensare*; S. Zarira's *Il Signor Io*; A. Stoppani's *Il bel paese*.

LATIN

(For Comprehensive Examination, see page 51)

Elementary

NOTE.—Candidates may offer two, three, or four units. Second year Latin alone will count as two units; second year with sight translation of either prose or verse (third year work) as three units; sight translation of prose and verse and advanced prose composition (third and fourth year work) as four units.

Beginning with June, 1919, the entrance examinations in Latin will be entirely at sight. Candidates are recommended to take the comprehensive examinations; but they may receive permission upon application to substitute the separate examinations of the College Entrance Examination Board in Latin 3 (second year Latin—if offering less than four units), *p* (sight translation of prose), *q* (sight translation of poetry), and 6 (advanced prose composition).

Amount and Range of the Reading Required

1. The Latin reading required of candidates for admission to College, without regard to the prescription of particular authors and works, shall be not less in amount than Cæsar, *Gallic War*, I–IV; Cicero, the orations against Catiline, for the Manilian Law, and for Archias; Vergil, *Aeneid*, I–VI.

2. The amount of reading specified above shall be selected by the schools from the following authors and works: Cæsar (*Gallic War* and *Civil War*) and Nepos (*Lives*); Cicero (orations, letters, and *De Senectute*); and Sallust (*Catiline* and *Jugurthine War*); Vergil (*Bucolics*, *Georgics*, and *Aeneid*) and Ovid (*Metamorphoses*, *Fasti*, and *Tristia*).

Prose Composition

The examination will demand thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school, with ability to use this knowledge in writing simple Latin prose. The words, constructions, and range of ideas called for will be such as are common in the reading of the preparatory course.

Advanced (counting one unit)

Candidates offering Advanced Latin will be required to have covered substantially the same ground as that included under Latin A1, A2, the course prescribed for freshmen. In Horace and Catullus, for which no equivalent will be accepted, the minimum requirement will be the first and third books of the Odes, and selections from the shorter poems of Catullus amounting to 400 lines, together with a satisfactory knowledge of the [prosody]. The candidate must

also offer Livy, Book XXI (chapters 1-45 inclusive), and Book XXII (chapters 2-7 and 43-56 inclusive), Terence's *Phormio* (entire), and Gildersleeve and Lodge's Prose Composition, exercises 1, 5, 9, 13, 17, 21, 25, 29, 33, 37, 41, 45, 49, 53, 57. If candidates wish to offer equivalents for the portions of Livy or Terence named above, they must designate them when they apply for examination in this subject.

MATHEMATICS

(For Comprehensive Examination, see page 52)

Elementary (counting three units)

a. Elementary Algebra (counting two units).

i. The four fundamental operations for rational algebraic expressions; factoring, determination of highest common factor and lowest common multiple by factoring; fractions, including complex fractions, ratio and proportion; linear equations, both numerical and literal, containing one or more unknown quantities; problems depending on linear equations; radicals, including the extraction of the square root of polynomials and of numbers; exponents, including the fractional and negative.

ii. Quadratic equations, both numerical and literal; simple cases of equations with one or more unknown quantities that can be solved by the methods of linear or quadratic equations; problems depending upon quadratic equations; the binomial theorem for positive integral exponents; the formulas for the n th term and the sum of the terms of arithmetic and geometric progressions, with applications.

It is assumed that pupils will be required throughout the course to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration, from physics, and from commercial life. The use of graphical methods, and illustrations, particularly in connection with the solution of equations, is also expected.

c. **Plane Geometry** (counting one unit). The usual theorems and constructions of good text-books, including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons, and the measurement of the circle; the solution of numerous original exercises, including loci problems; applications to the mensuration of lines and plane surfaces.

Advanced (counting one-half, one, or one and one-half units)

NOTE.—A candidate may offer one or more of the following subjects, each of which is equivalent to one-half unit.

Students who offer Plane Trigonometry at entrance must take Mathematics A5 in the freshman year.

b. **Advanced Algebra**.—Permutations and combinations, limited to simple cases; complex numbers, with graphical representation of sums and differences; determinants, chiefly of the second, third, and fourth orders, including the use of minors and the solution of linear equations; numerical equations of higher degree, and so much of the theory of equations, with graphical methods, as is necessary for their treatment, including Descartes's rule of signs and Horner's method, but not Sturm's functions or multiple roots.

d. **Solid Geometry**.—The usual theorems and constructions of good text-books; including the relations of planes and lines in space; the properties and measurements of prisms, pyramids, cylinders, and cones; the sphere and the

spherical triangle; the solution of numerous original exercises, including loci problems; applications to the mensuration of surfaces and solids.

f. Plane Trigonometry.—Definitions and relations of the six trigonometric functions as ratios, circular measurement of angles; proofs of principal formulas, in particular for the sine, cosine, and tangent of the sum and the difference of two angles, of the double angle and the half angle, the product expressions for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulas; solution of trigonometric equations of a simple character; theory and use of logarithms (without the introduction of work involving infinite series); the solution of right and oblique plane triangles, and practical applications.

MUSIC (counting one unit)

NOTE.—The candidate may offer either *a* or *b*.

a. Musical Appreciation (counting one unit)

The candidate is expected to have:

1. A general knowledge of the principal musical forms—song, classic dance, fugue, sonata (all movements), symphony—and of their historical development.

2. A general knowledge of the lives and environment of at least ten composers, including Bach, Mozart, Beethoven, Schubert, Chopin, and five of the following: Handel, Gluck, Haydn, Weber, Mendelssohn, Schumann, Wagner, Verdi, Brahms, Tschaikowsky, Grieg, MacDowell.

3. ¹ Familiarity with certain designated works: *Bach*, Prelude II and Fugue II, Book I, Well-Tempered Clavichord, Gavotte from Sixth English Suite; *Handel*, The Hallelujah Chorus; *Haydn*, Slow Movement from 'Emperor' Quartet (op. 76, No. 3); *Mozart*, Symphony in G Minor (entire); *Beethoven*, Sonata (op. 31, No. 3, entire), Slow Movement from Second Symphony, First Movement from Seventh Symphony; *Schubert*, First Movement from Unfinished Symphony, Song, 'The Erl-King', Song, 'Hark, Hark, the Lark'; *Mendelssohn*, Overture to 'Midsummer Night's Dream'; *Chopin*, Ballade (op. 47), Polonaise (op. 26, No. 1), Nocturne (op. 37, No. 2); *Schumann*, Allegro from Faschingschwank (op. 26, No. 1), Song 'Im wunderschönen Monat Mai'; *Wagner*, Overture to 'Tannhäuser', Prize Song from 'Die Meistersinger'.

In the examination in (3) the candidate will be expected to identify characteristic portions of the works set, when played by the examiner, and to give intelligent information concerning the form and character of the works themselves. The test will not require ability to perform or to read from printed music.

b. Harmony (counting one unit)

The candidate should have acquired:

1. The ability to harmonize, in four vocal parts, simple melodies of not fewer than eight measures, in soprano or in bass—these melodies will require a knowledge of triads and inversions, of diatonic seventh chords, and inversions, in the major and minor modes; and of modulation, transient or complete, to nearly-related keys.

2. Analytical knowledge of ninth chords, all non-harmonic tones, and altered chords (including augmented chords). (Students are encouraged to apply this knowledge in their harmonization.)

It is urgently recommended that systematic ear-training (as to interval, melody, and chord) be a part of the preparation for this examination. Simple

¹ The examination in (3) will be held only in September and will be open only to candidates who have passed the examination in (1) and (2).

exercises in harmonization at the pianoforte are recommended. The student will be expected to have a full knowledge of the rudiments of music, scales, intervals, and staff-notation, including the terms and expression marks in common use.

PHYSICS (counting one unit)

(For Comprehensive Examination, see page 52)

The candidate should be familiar with the elementary principles of physics and some of their practical applications and should be able to solve simple numerical problems. The preparation of the candidate should include:

- (a) The study of one of the standard text-books in use in secondary schools.
- (b) Instruction by lecture-table demonstrations in which the phenomena of physics are shown and the principles qualitatively illustrated.
- (c) Individual laboratory work, comprising at least thirty exercises. A suitable selection of experiments may be made from the list published by the College Entrance Examination Board.

A teacher's certificate of laboratory work must be presented. (See page 52.) *The candidate must be prepared to submit an indexed note-book of her laboratory work, in case the rest of her record in the subject, including the certificate, is not fully satisfactory.*

PHYSIOGRAPHY (counting one unit)

NOTE.—This is identical with the subject called Geography by the College Entrance Examination Board.

The candidate's preparation in physiography should include the study of one of the modern text-books by Davis, Tarr, Dryer, or Gilbert and Brigham, together with an approved laboratory and field course of at least forty exercises actually performed by the candidate. Each division of the subject should receive approximately the same proportion of attention in the laboratory as in the class-work. It is suggested that the exercises be divided somewhat as follows: Earth as a Globe, 5; Ocean, 5; Atmosphere, 12; Land, 18.

A teacher's certificate of laboratory work must be presented. (See page 52.) *The candidate must be prepared to submit an indexed note-book of her laboratory work, in case the rest of her record in the subject, including the certificate, is not fully satisfactory.*

SPANISH

(For Comprehensive Examination, see page 52)

a. Elementary (counting two units)

NOTE.—The entrance examinations in Elementary and Intermediate Spanish will include an Elementary Aural Test to be designated Spanish *x* supplementary to the present examination, designated Spanish *a*, and an Intermediate Aural to be designated Spanish *y* supplementary to the present examination which is designated *b*. The candidates in *x* and *y* will be examined in groups of not more than seventy-five in order that the examiner may be heard without difficulty.

These tests will be given in September for candidates taking the other examinations in the subject in either June or September.

The aural test (*x*) will consist of three parts:

1. A ten-minute exercise in writing easy Spanish prose from dictation.
2. Written reproduction, in English, of the content of a short passage in easy Spanish prose, to be read by the examiner.
3. Written answers in Spanish to easy questions read by the examiner in Spanish, the questions to be of two types: (a) On general topics, such as would be used in elementary practice of the school-room. (b) On a connected prose pas-

sage, to be read by the candidates (and returned) just before the questions are asked.

The Aim of the Instruction.—At the end of the course, the pupil should be able to pronounce Spanish accurately, to read at sight easy Spanish prose, to put into Spanish simple English sentences taken from the language of everyday life, or based upon a portion of the Spanish text read, and to answer questions on the rudiments of the grammar, as defined below.

The Work to be Done.—During the first year the work should comprise: (1) careful drill in pronunciation; (2) the rudiments of grammar, including the conjugation of the regular and the more common irregular verbs, the inflection of nouns, adjectives, and pronouns, and the elementary rules of syntax; (3) exercises containing illustrations of the principles of grammar; (4) the reading and accurate rendering into good English of from 100 to 175 duodecimo pages of graduated texts, with translation into Spanish of easy variations of the sentences read; (5) writing Spanish from dictation.

During the second year the work should comprise: (1) the reading of from 250 to 400 pages of modern prose from different authors; (2) practice in translating Spanish into English and English variations of the text into Spanish; (3) continued study of the elements of grammar and syntax; (4) mastery of all but the rare irregular verb-forms and of the simpler uses of the moods and tenses; (5) writing Spanish from dictation.

Suitable texts for the second year are: Valera's *El pájaro verde*; Alarcón's *El final de Norma*, *El capitán Veneno*; Valdés's *José*; Galdós's *Doña Perfecta*, *Marianela*; Padre Isla's version of *Gil Blas*; Carrion and Aza's *Zaragüeta*.

b. Intermediate (counting one unit)

To secure credit for Intermediate Spanish, candidates will be required to offer both *b* and *y*. The regulations governing examinations and credit are the same as those stated for Elementary Spanish.

a. Aural test: (1) Writing moderately difficult Spanish from dictation; (2) writing in Spanish the content of an 'unseen' passage of ordinary narrative prose read aloud by the examiner; (3) Writing in Spanish answers to oral questions, in Spanish, on a connected passage read aloud by the examiner.

b. Grammar, reading, and intermediate prose composition: (1) The principles of Spanish grammar in their application to ordinary prose; (2) interpretation by means of paraphrase, synonymy, or translation into English of moderately difficult prose or poetry, recent or classical; (3) translation into Spanish of easy connected prose or the original composition in Spanish of a simple passage.

The Aim of the Instruction.—At the end of the intermediate course the pupil should be able to read at sight ordinary Spanish prose or simple poetry, to translate into Spanish a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

The Work to be Done.—This should comprise the reading of from 400 to 600 pages of Spanish of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving Spanish paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

Suitable texts for the third year are: Benavente: *Tres comedias*; Moratín: *El sí de las niñas*; Galdós: *Doña Perfecta*; Valdés: *La hermana San Sulpicio*; Becquer: *Legends, Tales and Poems*.

ZOÖLOGY (counting one unit)

The following outline includes the principles of zoölogy which are indispensable to a general survey of the science. It is planned for a full year's course. It is not intended to indicate order of study of the topics—this must be left to the teacher and the text-book.

1. The general natural history—including general external structure in relation to adaptations, life histories, geographical range, relations to other plants and animals, and economic relations—of common vertebrates and invertebrates so far as representatives of these groups are obtainable in the locality where the course is given. The types suggested are a mammal, bird, lizard, snake, turtle, newt, frog, dogfish or shark, bony fish, clam, snail, starfish, earthworm, planarian, hydra, sea-anemone, paramœcium. In the case of arthropods, pupils should become familiar with common crustaceans, spiders, myriapods, and insects representing at least five orders. Actual examination of common animals with reference to the above points should be supplemented by reading giving natural-history information.

It is not expected that there will be time for making extensive note-books on the natural-history work; rather will the work in this line take the form of laboratory demonstrations. So far as time permits, drawings and notes should be made. The note-book mentioned below should contain at least drawings on the external structure of four animals not studied under Section 3, preferably two insects, a mollusk, and a second vertebrate.

2. The classifications of animals into phyla and leading classes (except the modern subdivisions of the worms) and the great characteristics of these groups—in the case of insects and vertebrates the characteristics of the prominent orders. The teaching of classification should be by practical work so as to train the pupil to recognize animals and to point out the chief taxonomic characteristics. The meaning of species, genera, and larger groups should be developed by constructive practical work with representatives of insect or vertebrate orders.

3. The general plan of external and internal structure, not the anatomical minutiae, of one vertebrate (preferably frog or fish) in general comparison with the human body; an arthropod (preferably a decapod); an annelid (earthworm or *Nereis*); a coelenterate (hydroid, hydra, or sea-anemone); a protozoön (a ciliate, and amœba when possible). In place of any of the above types not locally available there may be substituted a second vertebrate, an insect, a mollusk, or an echinoderm. Tissues, the study of which is recommended as optional,¹ should be examined first with the unaided eye, in such a structure as a frog's leg, and then with a microscope to demonstrate the relations of cells and intercellular substance in epithelium and cartilage and, if possible, in other tissues. The functions of the chief tissues and their positions in the body of a vertebrate should be pointed out.

4. (a) The general physiology of the above types, involving the essentials of digestion, absorption, circulation (respiration), cell-metabolism, secretion, excretion, and nervous functions. This should apply comparatively the essentials of elementary work in human physiology. Demonstrations and experiments, such as are suggested in high-school text-books on human physiology, should be introduced, or recalled if not previously well presented in elementary physiology, in connection with discussion of the chief functions. As far as practicable structure and function should be studied together.

(b) Comparison of the general life-processes in animals and plants (in connection with botany if zoölogy is first studied).

¹ Topics marked 'optional' are regarded as desirable for the best high-school zoölogy, but will not be required in examination.

5. The very general features of a sexual reproduction of a protozoön (preferably *Paramæcium*); alternation of generations in hydroids; reproduction and regeneration of *Hydra*; the very general external features of embryological development in a fish or frog; and (*optional*) the general cellular nature (not centrosomes and the like) of germ-cells, fertilization, and cell-division in developing eggs should, as far as possible, be demonstrated and briefly described. Also, the most interesting features of development should be pointed out in the case of other animals studied.

6. The prominent evidence of relationship suggesting evolution, within such groups as the decapods, the insects, and the vertebrates should be demonstrated. A few facts indicating the struggle for existence, adaptation to environment, variations of individuals, and man's selective influence should be pointed out; but the factors of evolution and the discussion of its theories should not be attempted.

7. (*Optional*.¹) Some leading facts regarding the epoch-making discoveries of biological history and the careers of such eminent naturalists as Darwin, Huxley, Pasteur, and Agassiz should be presented.

The above outline of a course in general zoölogy should be developed on the basis of a course of laboratory study guided by definite directions. This should be supplemented by the careful reading of at least one modern elementary textbook in general zoölogy. At least two-thirds of the time should be devoted to the practical studies of the laboratory. If good nature-studies have not preceded the course in high-school zoölogy, pupils should be encouraged to do supplementary work in the line of natural history.

A teacher's certificate of laboratory work must be presented. (See page 52.) *The candidate must be prepared to submit an indexed note-book of her laboratory work, in case the rest of her record in the subject, including the certificate, is not fully satisfactory.*

DESCRIPTION OF COMPREHENSIVE EXAMINATIONS

Chemistry.—The examination will be adapted to the proficiency of those who have received systematic instruction in the principles of chemistry and their applications in a school course in which laboratory experiments are performed by the pupil. In order to make due allowance for diversity of instruction in different schools, the paper will contain more questions than the candidate is expected to answer, and will require the recognition of the phenomena and of the laws that are of general significance, and the illustration of such phenomena and laws by well-chosen examples. It will include not only questions on the chemistry of laboratory practice but also, in an elementary fashion, questions on the chemistry of the household and of industry.

English.—The purpose of this examination will be to test the ability of the candidate to write clearly and correctly, and to show that she has read, understood, and appreciated a sufficient amount of English literature. The paper will contain some questions that cannot be answered except by candidates who are able to apply what they have learned to the solution of unexpected problems. Success in the examination will not necessarily depend upon a knowledge of the subject-matter of the particular books prescribed in the 'Uniform Entrance Requirements in English' (see page 32), though no candidate who has been intelligently prepared under these requirements should find herself at any disadvantage.

¹ Topics marked 'optional' are regarded as desirable for the best high-school zoölogy but will not be required in examination.

French.—The examination will be adapted to the proficiency of those who have studied French in school for two, three, or four years.

The paper will include passages of French prose or verse or both of varying degrees of difficulty to be translated into simple and idiomatic English. It will also contain passages in English of varying degrees of difficulty to be translated into French, and questions on grammar. Opportunity will be given to those who have had special training in French to show their ability to express themselves in that language.

German.—The examination will be adapted to the proficiency of those who have studied German in school for two, three, or four years.

The paper will include passages of German prose or verse or both of varying degrees of difficulty to be translated into simple and idiomatic English. It will also contain passages in English of varying degrees of difficulty to be translated into German, and questions on grammar. Opportunity will be given to those who have had special training in German to show their ability to express themselves in that language.

Greek.—The examination will be adapted to the proficiency of those who have studied Greek in a systematic school course of five exercises a week, extending through two or three school years.

The paper will include passages of simple Attic prose and of Homer to be translated at sight, and questions, based upon these passages, to afford the candidate means of showing her mastery of the ordinary forms, constructions, and idioms of the language. The paper will also include passages in English to be turned into Greek, and questions on prosody, on the Homeric poems, and on Homeric life.

History.—The paper will consist of five divisions made up of questions on Ancient History, Medieval and Modern History, Modern European History (including English History from 1760), English History, and American History (including Civil Government). The questions on each division will be partly prescribed and partly optional. If the candidate has studied but one of these divisions, she will be expected to answer the prescribed questions on that division, one of them being a map question. She should spend about two hours on these prescribed questions and should devote the remaining hour to the optional questions on the same division. If, on the other hand, the candidate has studied two or more of these divisions, she will be expected to answer, in addition to the prescribed question on *one* of these divisions, questions on such other divisions as she may have studied.

In reading the papers, account will be taken of the year of the school program in which the subject has been studied. As further evidence of the candidate's proficiency, note-books¹ may be submitted.

Latin.—The examination will be adapted to the proficiency of those who have studied Latin in a systematic school course of five lessons each week, extending through two, three, or four years.

The paper will include passages of Latin prose and verse of varying degrees of difficulty to be translated at sight, and passages for Latin composition of

¹ The College Entrance Examination Board does not require or receive note-books. Candidates wishing to submit note-books must forward them directly to the proper authorities of the university, college, or scientific school concerned.

varying degrees of difficulty. Accompanying the different passages set upon the paper will be questions on forms, syntax, and the idioms of the language, as well as questions on the subject-matter, literary and historical, connected with the authors usually read in schools.

Each candidate will choose those parts of the paper which are designed to test such proficiency in the language as may properly be acquired in two, three, or four years' study; but a candidate who has studied Latin four years may not select the more elementary parts of the paper. The proper parts will be indicated on the examination paper.

Mathematics.—The examination will be adapted to the proficiency of those who have had not less than the usual school course in Elementary Mathematics, comprising Algebra through Quadratics and Plane Geometry, and will also provide the means by which those who have extended their study to one or more branches of Advanced Mathematics, namely, Solid Geometry, Logarithms and Trigonometry, and Advanced Algebra, may exhibit their proficiency in any or all of these branches of Mathematics. There will be two papers, one for those who have had no instruction beyond Elementary Mathematics and one for those whose instruction has gone farther. Every candidate who has received instruction beyond Elementary Mathematics will be expected to take the paper containing questions on Advanced Mathematics, and to devote at least half her time to those questions which are based on the Advanced Mathematics she has studied.

Physics.—The examination will be adapted to the proficiency of those who have had such a course of school training in the elementary facts and principles of physics as is described in the detailed definition of Physics. In order to make due allowance for diversity of instruction in different schools, the paper will contain more questions than the candidate is expected to answer.

Spanish.—The examination will be adapted to the proficiency of those who have studied Spanish in school for two or three years.

The paper will include passages of Spanish prose or verse or both of varying degrees of difficulty to be translated into simple and idiomatic English. It will also contain passages in English of varying degrees of difficulty to be translated into Spanish, and questions on grammar. Opportunity will be given to those who have had special training in Spanish to show their ability to express themselves in that language.

NOTE-BOOKS, DRAWINGS, ETC.

Each candidate must present at the time of the examination a certificate from her teacher certifying that the laboratory requirements in each science offered by the candidate have been complied with. A statement of the laboratory requirements in the several sciences will be found in the preceding pages. This regulation applies also to drawing. In all doubtful cases the candidate will be required to submit a laboratory note-book. *This regulation applies to candidates using College Entrance Examination Board, Columbia University, State Education Department, or any other entrance examinations.*

Blank forms may be obtained on application to the Secretary of the College.

English exercise books, submitted in connection with the Columbia University examinations in English 2 (see page 34), Advanced English essays or Advanced History note-books should be sent to the Secretary of the College *at least two weeks before* the examinations begin. No separate ratings will be given on note-books in Advanced English and Advanced History, but the note-books will be read in connection with the examinations in these subjects. English essays will *not* be returned to the writers.

REGISTRATION

Registration.—Before attending any University exercise each student shall comply with the regulations in regard to registration and payment of fees. She shall present herself in person at the office of the Registrar and shall there file a registration blank giving such information as may be required for the College records.

Every new student shall also at the time of registration file a statement of the courses which the Provost, on the recommendation of the Committee on Instruction, has authorized her to pursue. Students already in College shall give notice of their choice of elective courses for the ensuing year to the Registrar on or before Friday, May 9, 1919.

The office of the Registrar will be open for registration from Wednesday, September 17, to Tuesday, September 23, 1919, and on Saturday, January 31 and Monday and Tuesday, February 2 and 3, 1920. New students may register also on Wednesday, September 24, 1919.

Students registering late are charged an additional fee of \$5 and are held accountable for absences thus incurred.

Each student who holds a scholarship shall present her scholarship certificate to the Bursar *at the time of registration*.

Each person whose registration has been completed will be considered a student of the University during the period for which such registration is held valid. No student registering in Barnard shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the consent of the Dean.

Withdrawal.—An honorable discharge will always be granted to any student in good academic standing, and not subject to discipline, who may desire to withdraw from the College, but no student under the age of twenty-one years shall be entitled to a discharge without the assent of her parent or guardian furnished in writing to the Dean. Students withdrawing are required to notify the Registrar. Application for the return of fees must be made in writing at the time of withdrawal.

GENERAL STATEMENT REGARDING FEES AND THE REGULATIONS GOVERNING THEIR PAYMENT

All fees are payable semi-annually in advance at the Bursar's Office, and no reduction is made for late registration. Under the regulations, the privileges of the College are withheld from any student delinquent in the payment of her fees.

The fees to be paid by students are subject to change at any time in the discretion of the Trustees.

The registration or matriculation fee must be paid at the time of entrance. No official record of a student's attendance can be noted until this fee has been paid.

Checks should be made payable to the order of Barnard College, and addressed to the office of the Bursar.

No application for a return of fees can be considered unless made in writing at the time of withdrawal.

FEES

For matriculation or registration	\$5.00
Required of all students before entrance. This fee is payable but once and is never refunded.	
For late registration (see p. 53)	5.00
For tuition , payable in two equal instalments, at the beginning of each session	200.00
Regular students are charged \$200.00 for the year, \$100.00 for each session.	
Special or part-time students are charged at the rate of \$10.00 a point for instruction with a maximum fee of \$200.00 for the year. If the entire fee is less than \$100.00, the whole must be paid upon registration.	
For examination , payable in each case before the examination is held:	
For entrance (see p. 21)	5.00
For any examination or single series of examinations taken at any other time than at the conclusion of a course actually attended, whether taken prior or subsequent to admission	5.00
For the degree	15.00
For laboratory work:	
Botany (Courses 51, 52, 53, 54, 55, 56), each course	1.25
Botany (Courses 58, 151, 152, 153, 154, 156, 157, 158, 159, 161, 162), each course	2.50
Chemistry (Courses 5, 6), each course	4.00
Chemistry (Courses 5, 6 for pre-medical students), each course	6.00
Chemistry (Courses 63, 64), each course	9.00
Chemistry (Courses 65, 66), each course	10.00
Chemistry (Course 42a)	12.00
Chemistry (Courses 41, 42, 105, 106, 145, 146), each course	12.50
Mineralogy (Course 2)	1.50
Zoölogy (Courses 1, 2, 3, 4), each course	2.50
Should Course 3 be taken in connection with Course 1 or Course 53, or Course 4 be taken in connection with Course 2 or Course 102, the one fee covers both courses.	
Zoölogy (Courses 53, 54, 101, 102, 151, 152), each course	2.50
For the use of the gymnasium	7.00
Required of every student.	

FEES OF STATE SCHOLARS

Holders of State Scholarships should file their University Scholarship Certificates at the office of the Bursar *on the day of registration* and should be prepared to pay, at the same time, the following fees:

Matriculation fee	\$5.00
Tuition fee	50.00
Gymnasium fee	7.00
	<hr/>
	\$62.00

and laboratory fee according to work taken.

February payment, tuition fee \$50.00

The certificates will be held in the Bursar's office until the State funds have been received; they will then be returned to the candidates. A bulletin-board notice will give information as to when they may be claimed.

DORMITORY FEES IN BROOKS HALL

Deposit	\$15.00
Payable in advance to secure assignment of room, and held until final closing of accounts for the year as security for damage to rooms, fittings, or furniture, or for any other indebtedness.	
Electricity , charged for by meter.	
Board	225.00
Payable in two equal instalments in advance, on or before taking possession of room, and on February 1.	
Rent	
Payable in two equal instalments in advance, on or before taking possession of room, and on February 1.	
Single rooms	140-270.00
<i>Some scholarship grants of \$50 each are available for students who cannot meet the entire cost of residence.</i>	
Two-room suites (for one person)	350-385.00
Three-room suites (for one person)	440-470.00
Private bath (for one, two, or three persons)	50.00
Special Maintenance Charge	50.00

In order to meet the increase in the cost of food and all other supplies caused by the war, a maintenance charge of \$50, will be imposed on each resident of Brooks Hall for the academic year 1919-1920. It is hoped that no increase in this charge will become necessary.

ESTIMATED NECESSARY EXPENSES

Board and single room in Brooks Hall, \$365 to \$495 for the academic year.
Special maintenance charge, 1919-1920, \$50. (See above.)
Some scholarship grants of \$50 each are available for students who cannot meet the entire cost of residence.
 Electricity, \$5.

Board and rent in the Alumnae Coöperative Dormitory, about \$315.

Matriculation fee, \$5.

Annual tuition fee, \$200.

Gymnasium fee, \$7.

Text-books, from \$10 to \$20 each year.

Gymnasium costume, averaging \$12.

Final examination for the degree, \$15.

THE PROGRAM OF STUDIES

Upon satisfactory completion of a curriculum arranged on the plan to be described below (pp. 58-60) the student is recommended by the Faculty of Barnard College to the Trustees of Columbia University for the degree of Bachelor of Arts. Diplomas are issued only at Commencement, and in February and October, upon the completion of the requirements for the degree.

The principles of the program of studies are as follows:

1. Studies are specifically prescribed, *i. e.*, obligatory upon all candidates for a degree, or required to be in certain subjects without the prescription of specific courses, or elective, *i. e.*, to be taken, with certain restrictions, at the pleasure of the student.

2. Prescribed studies, with the exception of Economics A and Zoölogy C, must be taken as far as practicable during the first two years of residence; and subjects taken in college which are continuations of subjects offered at entrance must be taken as far as possible in the first year.

3. No courses other than those specified in the Announcement may be taken except by students specially qualified to pursue them with advantage and with the consent of the Provost, on the recommendation of the Committee on Instruction.

4. No combination of courses amounting to less than 12 or more than 16 points may be made in any winter or in any spring session without the consent of the Provost, on the recommendation of the Committee on Instruction.

5. No credit will be given for a one-hour course, unless it is taken in connection with and as a supplement to a cognate course.

6. No more than four hours of class work, or its equivalent in laboratory work, or seven hours of class work and laboratory work combined, may be taken on the same day.

7. Students entering by transfer from other colleges are required to take at least 6 points of their major subject at Barnard.

8. Admission to courses depends upon completion of the prerequisites as stated for each course. In all cases the requirements as to prerequisites for any course must be completed before the beginning of the winter or of the spring session in which the course is given. Where no prerequisite is stated and where no limitation is noted the course may be taken and counted for a degree by any student of the college.

9. To be recommended for a degree, a student must have made at least 84 points in actual college residence, and at least 24 of these while registered in Barnard College, of which 24 points at least half should be taken during the senior year.

10. All requirements for a degree must be fulfilled by the candidate within six years from the time of her first matriculation as a freshman in college, whether at Barnard or elsewhere; within four and a half years from similar matriculation as a sophomore; within three years from matriculation as a junior; and within one and a half years from similar matriculation as a senior. If the candidate fails to satisfy the requirements within the time here specified, she is to lose credit for all the points gained by her toward the degree, unless, in individual cases, the Faculty shall otherwise direct.

11. No change of program, either by adding or by dropping a course, may be made by a student without the written consent of the Provost, on recommendation of the Committee on Instruction. Except on the initiative of the departments or of the Committee on Instruction, such change will be allowed only in the first two weeks of the winter session and in the two weeks *preceding the opening of the spring session*. Applications by students for change of program for the winter session must be filed during the first two weeks of that session; applications for change of program for the spring session must be filed before that session begins. Until action is taken upon the application, the student must attend the courses originally named in her program.

12. The election of specific courses in Extension Teaching or in a summer session at Columbia University or elsewhere must be approved by the Committee on Instruction of Barnard College. No student who has received a grade of D or F during the preceding academic year will be allowed to count more than 6 points of work taken in a summer session, unless the Committee on Instruction shall otherwise decide. In no case may more than three courses or 8 points of work be counted in a summer session in any one year. No summer session course that is passed with a grade below C will be credited toward a Barnard degree.

13. Courses in Extension Teaching approved by the Committee on Instruction may be credited toward the degree of A.B. for matriculated students registered in Extension Teaching who maintain a grade of at least C.

Students of Barnard will be allowed to attend extension courses which are approved by the Committee on Instruction, and to count them toward the degree of A.B. under the following regulations:

(a) The election of extension courses must be approved by the Committee on Instruction and by the Director of Extension Teaching.

(b) Students will not be allowed to exceed a total of 16 points, including the points of extension courses, at one time, save with the special permission of the Committee on Instruction, for reasons of weight.

(c) Students desiring to count these courses toward the degree of A.B. must obtain in them a grade of at least C.

Before final choice of elective studies, all students should consult their advisers (see p. 63), the Committee on Instruction, and, in case of any doubt, the instructors in charge of particular courses as well. Electives must be chosen on some consistent plan. Conflicts between courses falling at the same hours are to be avoided by careful study of the Scheme of Attendance at the end of this volume, which has been drawn up with a view to making possible for every one the selection of a reasonable number of harmonious elective courses that shall not conflict in hours with each other or with prescribed courses. It often

happens that some of the courses of one department form valuable supplements to certain courses of another, so that combinations of work under two or more departments are very desirable. In all such cases the best selections can be made only after consultation with officers of one or more of the departments concerned. This applies particularly to the major subject (see below and p. 60).

REQUIREMENTS FOR ALL CANDIDATES FOR THE DEGREE OF
BACHELOR OF ARTS

The requirement for graduation for members of the Class of 1923 and thereafter is 120 points, exclusive of prescribed work in Physical Education. The term point usually signifies the satisfactory completion of work requiring attendance at class one hour or in the laboratory two hours a week during a winter or a spring session.

The subjects treated in the courses offered in Barnard College may be classified in the following groups:

- I. Languages, Literatures, and other Fine Arts:
Architecture, English, Fine Arts, French, German, Greek, Italian, Latin, Music, Romance Philology, Spanish.
- II. Natural Sciences:
Anthropology, Astronomy, Botany, Chemistry, Geography, Geology, Mathematics, Mineralogy, Physics, Experimental Psychology, Zoölogy.
- III. Social Sciences:
Anthropology, Classical Civilization, Economics, Education, Geography, History, Philosophy, Politics, Introductory Psychology, Religion, Sociology.

It will be observed that the prescription of courses insures a fair distribution of work among these different groups. The student should bear them in mind in selecting related subjects.

I. Specific Courses Prescribed

English A	6 points
English X	0 points
History A	6 points
Mathematics A	6 points
Philosophy A ¹	3 points
Psychology A ¹	3 points
Economics A	6 points
Zoölogy C	2 points
Physical Education A, B, C, and D	

II. Subjects Required Without Prescription of Specific Courses

A Major Subject of at least 24 points of not less than grade C must be taken in some one subject under some one department. The major may include all courses except English A, English X, French 1-2, German 1-2, Italian 1, and Spanish 1.

¹ Unless Philosophy 61-62, 6 points, is substituted in the junior or senior year for Philosophy A or for both Philosophy A and Psychology A.

A Minor Subject of at least 12 points. The minor may include all courses except English A, English X, French 1-2, German 1-2, Italian 1, and Spanish 1.

The Classical Requirement

All students who have entered on 2 or more units of Latin or Greek are required to take at least 6 points of Latin or Greek language, classical literature (in translation), classical civilization, ancient history, or ancient philosophy.

All students who have offered neither Latin nor Greek at entrance are required to take Latin 1-2 (8 points) or Greek 1-2 (8 points), or 12 points in classical literature (in translation), classical civilization, ancient history, or ancient philosophy.

The Foreign Language Requirement

All students for the degree must, *before the beginning of the senior year*, satisfy the following requirements:

They must demonstrate to the Department of Romance Languages or to the Department of Germanic Languages (a) their ability to read at sight either French prose or German prose of ordinary difficulty and (b) their ability to understand spoken French or spoken German and use the language in expressing connected ideas.

As a rule the departmental test prescribed under this requirement will take the form of an oral examination in translation at sight. It may be taken during the month of March or the month of November *before May 1 of the junior year*.

In addition to the foregoing requirement, students must have such sound acquaintance with one other foreign language, ancient or modern, as would be equivalent to not less than three entrance units in the language, such proficiency to be determined by entrance examinations, by special tests, or by specific college courses, recommended for that purpose by the departments concerned under the approval of the Faculty.

The Natural Science Requirement

At least 8 points in one of the following natural sciences: botany, chemistry, geology, physics, experimental psychology, or zoölogy.

The Fine Arts Requirement

At least 6 points in literature (in any language), music, architecture, or fine arts courses. English A and English X and the elementary courses in foreign languages do not count toward these 6 points.

III. Program of Studies for the Degree of Bachelor of Arts with the Certificate in Science or Mathematics

Candidates for the degree of Bachelor of Arts who desire to specialize in the natural sciences or in mathematics may elect the foregoing program of studies with the modifications given below. For the satisfactory completion of the specified requirements they will receive on graduation a certificate which will indicate the nature of the program of studies pursued.

This program of studies is the same as the foregoing program, except in the following specific respects:

A Major Subject¹ of at least 28 points (instead of 24 points) of not less than grade C in one of the following natural sciences: astronomy, botany, chemistry, geography, geology, mineralogy, physics, experimental psychology, and zoölogy, or in mathematics, and

Two Minor Subjects¹ of at least 12 points each (instead of one minor of 12 points), one in a subject allied to the major, and one in a diverse subject, both to be chosen from the foregoing list with the addition of anthropology.

Additional Grouped Work¹ in science, or in mathematics, or in science and mathematics, amounting to at least 8 points, so as to make a total of at least 60 points in science, or in science and mathematics.

PREPARATION FOR PROFESSIONAL SCHOOLS

Students who intend to transfer to professional schools are of two classes, those who leave Barnard at the end of the sophomore year, without candidacy for the Bachelor of Arts degree, and those who at the end of the junior year wish to take advantage of the 'combined course', counting the first year of an approved professional school in place of the senior year at Barnard.

Students intending to transfer to professional schools without candidacy for the degree of Bachelor of Arts are required to take English A, English X, Physical Education throughout their stay at Barnard, and such other courses as are appropriate in preparation for the professional schools to which the transfer is to be made. (See Architecture, Business, Journalism, Medicine, pp. 61, 62.)

Students who wish to count the first year of a professional school in place of the senior year at Barnard should complete at Barnard 90 points of work. This must include all specifically prescribed courses, three years of Physical Education, the required subjects outlined under paragraph II (page 58)—except that they need complete only 18 points in the major subject—and such courses as the professional school may recommend. Students who have met these requirements may, on satisfactory completion of the first year in an approved professional school, become candidates for the degree of Bachelor of Arts. (See Architecture, Business, Journalism, Medicine, pp. 61, 62.)

COURSES IN THE GRADUATE FACULTIES AND PROFESSIONAL SCHOOLS OPEN TO BARNARD STUDENTS

Political Science, Philosophy, and Pure Science

Certain graduate courses in Columbia University under the Faculties of Political Science, Philosophy, and Pure Science which are listed in the Barnard Announcement are open, with the consent of the department concerned and the Committee on Instruction, to specially qualified seniors and in some cases juniors. In these courses special arrangements are made for the supervision of the work of undergraduates. Since graduate work is on an entirely different basis of credit from undergraduate work, it is rarely possible for a student in Barnard College to take any graduate courses for which these special arrangements have not been made. Seniors of unusual ability may, however, be permitted in special cases

¹ Zoölogy C may not be counted as part of a major, or of a minor subject, or of the grouped work amounting to 60 points.

to elect not more than two graduate courses not listed in the Barnard Announcement.

Graduate courses, when approved by the Committee on Instruction, may be counted by an undergraduate toward the Bachelor's degree. Or, in case the student has more points than the number required for that degree, they may, under certain circumstances, be credited toward the Master's degree. For full information concerning the content of the courses students are referred to the appropriate University announcement mentioned at the end of the departmental statements given below.

Architecture

Certain courses in the School of Architecture are open to regular students in Barnard College, and may be credited toward the Barnard degree. They are described below in the departmental statement on page 89.

After two years of collegiate work in Barnard, amounting to at least 64 points' credit and including French 1, 2 and Mathematics A1-A2 or their equivalents and such other courses as may be recommended by the School of Architecture, a student may transfer without examination to the School of Architecture in Columbia University and become a candidate for the degree of Bachelor of Architecture. The course in the School of Architecture leading to this degree generally requires four years for its completion.

For full information, students are referred to the Announcement of the School of Architecture.

Business

After two years of collegiate work in Barnard, amounting to at least 64 points' credit, including two years of English, two years of French or German or Spanish, and at least one year each of history, economics, commercial geography, and mathematics (except for the secretarial course), a student may transfer without examination to the School of Business in Columbia University and become a candidate for the degree of Bachelor of Science in Business. Those planning to take the secretarial course should take two years of composition and one of English literature, but need not take mathematics. The course in the School of Business leading to this degree generally requires for its completion two years in addition to the two years of collegiate work in Barnard College.

For full information students are referred to the appropriate University Announcement.

Journalism

After two years of collegiate work in Barnard, amounting to at least 64 points' credit, including two years of English or classics, one year each in natural science, modern language in advance of the intermediate admission requirement, politics or economics (both are advised), and general European or American history (both are advised), a student may transfer without examination to the School of Journalism of Columbia University and become a candidate for the degree of Bachelor of Literature. The course in the School of Journalism leading to this degree generally requires for its completion two years in addition to the two years of collegiate work in Barnard College.

For full information, students are referred to the Announcement of the School of Journalism.

Medicine

After collegiate work of good grade at Barnard amounting to at least 72 points and including one year of physics, one year of inorganic chemistry based on college entrance chemistry, one-half year of qualitative analysis, one-half year of organic chemistry, one year of biology, two years of English, elementary and intermediate French or German, a student may, on recommendation of the Faculty of Barnard College, transfer without examination to the College of Physicians and Surgeons of Columbia University and become a candidate for the degree of Doctor of Medicine. The course leading to this degree requires for its completion four years of study in the College of Physicians and Surgeons and a fifth year of service as hospital interne. While the above courses represent the minimum requirements for admission, it is strongly recommended by the authorities of the College of Physicians and Surgeons that if possible the collegiate work include three instead of two years so as to allow a more thorough preparation in science. *The Barnard College regulations in regard to the amount of work which may be carried make it impossible for a student to complete the above minimum of 72 points in two years without summer session courses. The Barnard College Faculty also requires that all except students of very unusual ability take three years of pre-medical work before being recommended for transfer to the College of Physicians and Surgeons.*

For full information students are referred to the Announcement of the College of Physicians and Surgeons.

Music

Courses in the history and theory of music and in composition, given at Columbia University, are open to regular students in Barnard College and may be credited toward the Barnard degree. They are described below in the departmental statement on page 96.

For full information students are referred to the Announcement of the Department of Music.

Students wishing to combine collegiate work with vocal or instrumental training may, while pursuing courses at Barnard, enroll as regular students at the Institute of Musical Art, Claremont Avenue and 122d Street. They must obtain the consent of the Dean of Barnard College and the Director of the Institute. Work at the Institute will not be counted toward the Barnard degree and must be paid for separately.

Education

Certain courses in the history and theory of education given by Teachers College are open to regular students in Barnard College and may be credited toward the Barnard degree. They are described in the departmental statement on page 86 below.

While the courses in the School of Education are primarily intended for graduate students, those seniors who are specially qualified may, with the permission of the Dean of Barnard College and of the Director of the School of Education, elect these courses with a view to securing the Teachers College diploma at the same time that the Barnard degree is awarded or with the addition of a summer session or semester. Such students must satisfy the diploma requirements as

stated in the Announcement of the School of Education. A Teachers College Diploma for the teaching of an academic subject in a secondary school may be obtained upon the completion of a program to include as a minimum Education A, Education B, Education 281, Education 283 (or 284), a year's work in methods in an academic subject in which the student has completed a major in Barnard College, and a unit course (5 weeks) in the teaching of a second academic subject. Students who are planning to teach in New York State may so arrange this work as to qualify them for the College Graduate Professional Provisional Certificate granted by the Regents of New York.

For full announcement of courses and diploma requirements students should consult the Announcement of the School of Education.

Religion

Certain courses in the Union Theological Seminary are open, with the consent of the Committee on Instruction and the President of the Seminary, to specially qualified seniors, and may be counted toward the Barnard degree.

Social Work

Exceptional advantages are available for students desiring to specialize in economics, sociology, and social economy, in preparation for social and philanthropic work. Besides the courses given at Barnard in economics and social science, certain graduate courses in this department of Columbia University are open, with the consent of the department and of the Committee on Instruction, to specially qualified seniors. Because of the affiliation between the College and the New York School of Philanthropy, certain courses in the latter institution may also be pursued, with the consent of the Department of Economics and of the Committee on Instruction, and the approval of the Director of the School, by specially qualified seniors, and counted toward the Barnard degree. No extra tuition fee is required, but a matriculation fee of five dollars is charged at the time of the first registration in the School. The purpose of this School is to fit men and women for social service in either professional or volunteer work. It offers valuable courses in child welfare, social research and statistics, immigration, family welfare, medical social service, labor problems, social psychiatry, government, criminology, employment management, community organization, recreation, and the history of social work. By taking some of this work in her senior year a Barnard student may anticipate part of the requirements for the diploma of the School of Philanthropy.

ADVICE TO STUDENTS

The Freshman Year.—At the opening of the year the incoming students shall register as is customary, and shall make out their elective blanks subject to the approval of the Committee on Instruction. During the months of November and December each member of the freshman class shall confer with the Dean, or with a Faculty adviser appointed by the Dean, regarding her studies and other matters that may be of interest to her. During the month of April, after the

appearance of the catalogue, each freshman shall consult with any instructor whose work she has taken in the freshman year, or with her freshman adviser, regarding her election of courses for the sophomore year. No elective blank shall be considered by the Committee on Instruction that does not bear the signature of the adviser.

The Sophomore Year.—Before November 1 all deficient students shall consult with the Dean. In April students shall, as during the freshman year, fill out elective blanks subject to the approval of the adviser. The adviser may be any instructor in Barnard College whose work the student has taken in the freshman or the sophomore year, but should preferably be an instructor in the department in which the student means to elect her major subject, which should be chosen not later than the end of the sophomore year. Before May 9, 1919, elective blanks bearing the signatures of the adviser and the student shall, as usual, be submitted to the Committee on Instruction for approval.

The Junior Year.—In April students shall make out elective blanks as in the preceding year. The adviser should be from the department in which the student has elected her major subject and should, as a rule, be the same as the adviser chosen at the end of the sophomore year. Elective blanks shall be filed in accordance with the usual regulations and submitted to the Committee on Instruction for approval. Whenever necessary, the Dean will consult with particular students.

The Senior Year.—During the senior year students will be advised as necessary in individual cases. They should freely consult the Dean and their instructors, who will gladly give advice either as to the college courses they are taking or concerning possibilities in various lines of work after graduation.

GENERAL REGULATIONS REGARDING EXAMINATIONS IN COURSE, CREDIT, AND ADVANCEMENT

Stated Examinations.—Two series of examinations are held every year, one in January and the other in May. These are the only stated examinations. In 1920, the mid-year examinations begin on Wednesday, January 21, the final examinations on Monday, May 17.

Absences.—All students are expected to attend regularly and promptly all the exercises in the courses for which they are registered. Any considerable amount of absence or tardiness will result in the lowering of a student's mark or the loss of one or more points of credit for the course. At the end of each term each student may file in the Registrar's office, on blanks provided for that purpose, a list of her absences and tardinesses with the reasons therefor. After considering these excuses and the reports from the instructors, the Committee on Instruction will adjust marks and credits.

Special Examinations.—Special examinations are held as follows: in the first week of March of each year, and within the two weeks preceding the opening of the College in the fall.

Such examinations are open, by permission of the Provost, on recommendation of the Committee on Instruction, to:

(a) Students who have received F (or D in excess of 6 points), provided that, in the opinion of the instructor and that of the Committee on Instruction, the

term work has been good enough to make repetition in class or laboratory unnecessary. Ordinarily F (or D in excess of 6 points) in prescribed work involves repetition of the course.

(b) Students who have been absent, for imperative reasons, from the stated examination in any course provided their term work has been satisfactory.

(c) In rare instances, for reasons of weight, to other students.

In all cases application for permission to take a special examination must be made in writing.

For any such series of examinations, or any such single examination taken at any time other than the stated examination period immediately following the conclusion of the course or courses involved, a fee of \$5 must be paid to the Bursar before the student is admitted to the examination.

Grades and Credit.—The student's performance in a course is rated according to the following grades: A, excellent; B, good; C, fair; D, poor; F, failure.

No student may count for promotion from any class to the next higher class more than six (6) points of D work or may be credited with more than six (6) points of D work, during her senior year. In case more than four years is required for her degree, not more than twenty-four (24) points of D work altogether may count for the degree. Of several courses in which a student is marked D she may choose the ones to be counted.

Additional Credit for High Standing.—At the end of the winter and of the spring session, when all the reports are filed in the Registrar's office, additional credit for high standing is given as follows:

The mark A in courses aggregating six points of work (no course to be counted twice) entitles the student to one point of extra credit, provided she has satisfactorily completed all the work of the session, and has not fallen below the mark B in any course.

Classification of Students.—Matriculated students whose record as to entrance conditions and the completion of prescribed courses is satisfactory to the Committee on Instruction, are classified as follows:

Freshmen, those who have completed less than 26 points of college work.

Sophomores, those who have completed 26 points.

Juniors, those who have completed 58 points.

Seniors, those who have completed 90 points.

In all cases the requirements for promotion must be met in full before the beginning of the winter session.

A student who fails to meet the requirements for advancement from one class to another may, with the consent of the Provost, on the recommendation of the Committee on Instruction, remain in College and repeat the course or courses in which her deficiency exists, or, in the case of elective courses, other courses equivalent thereto in time. She may not, however, register as a special student.

Should a student fail of advancement in two successive years, she shall be permanently dismissed from the College, unless, for reasons of weight, the Provost, on the recommendation of the Committee on Instruction, shall otherwise determine.

SCHOLARSHIPS

Number and Value.—There are, altogether, fifty-six scholarships ranging in value from \$120 to \$600, forty-four small supplementary scholarships of \$50 each, and eight special funds for the benefit of students who need financial aid. Each scholarship consists of the income of a certain fund given to the College. The values stated in the list on pages 67-70 are approximate estimates of the income of these funds, which are applicable to the fees of the year. Under certain circumstances, holders of scholarships which do not cover the entire tuition fee may receive supplementary grants from the special funds.

Classification.—The scholarships are of two sorts, competitive and non-competitive. Some of the competitive scholarships are awarded to entering freshmen for excellence in entrance examinations. Others are awarded to students already in Barnard for excellence in their college work. The non-competitive scholarships are awarded to students needing financial aid, and, as a rule (except in the case of the Pulitzer Supplementary Scholarships), only to those who have passed at least one year in college. They are held, unless otherwise stated, for one year only.

Conditions.—Two scholarships may not be held by the same person, unless one is a Supplementary Scholarship. Should two scholarships be assigned to the same student in one year, she must at once choose which she will retain. If a student fail to maintain a grade of at least C in all courses which she pursues, or if for any other reason she show herself an unsatisfactory candidate, she shall forfeit her scholarship and, in the case of non-competitive scholarships, shall be ineligible for re-election the following year. No student with entrance conditions unremoved, or with a grade below C in the year previous to that in which she is asking for help, shall be eligible for a scholarship. For competitive entrance scholarships a complete set of entrance examinations is required. These examinations should, as a rule, be taken in June, since the scholarships are generally awarded before the beginning of the winter session; they may be taken, if the candidate so desire, in two successive Junes. Scholarships vacant in February may, however, be awarded to candidates entering at that time on the January examinations.

Application.—Before the first of April of each year all applications for non-competitive scholarships, accompanied with full credentials, must be filed at the Dean's office upon special blanks to be obtained there. Candidates for the competitive scholarships to be awarded on the basis of the June examinations should, in their application to the Secretary of the College Entrance Examination Board (see p. 20), mention the Barnard College scholarships for which they are competing. For the Carpentier Scholarships, the Pulitzer Scholarships, the Martha T. Fiske Scholarship, and the Jessie Kaufmann Scholarship, application must be made to the Secretary of Barnard College before the first of May. In order to qualify for the receipt of her stipend, the holder of a scholarship should report at the office of the Registrar not later than the first day of the academic year.

COMPETITIVE SCHOLARSHIPS

These, subject to the foregoing general regulations for scholarships, are as follows:

Brooklyn Scholarships (\$150 each) 12

Founded in 1895 by the Trustees of Columbia University in recognition of the gift to Columbia University by President Low of a memorial building for the University Library. They are open to students who have received their training in either the public or the private schools of Brooklyn, N. Y., and are residents of that city. Three of these scholarships will be awarded annually to qualified competitors who pass in June without conditions the best entrance examinations. They may be held for the entire college course, but a holder, while retaining the title 'Brooklyn Scholar', may transfer the income to any properly qualified candidate from Brooklyn without having her action made a matter of public record.

Carpentier Residence Scholarships (for annual income, see below) 8

Founded in 1919 with a bequest from the late Horace W. Carpentier. Eight Residence Scholarships, four of which carry an income of \$600 a year apiece and four an income of \$400, are open to women who are not residents of New York City or its vicinity. They are awarded on the merits of entrance examinations taken under the College Entrance Examination Board and on the candidates' general character and power of leadership. The examinations may be taken, if the candidate so desire, in two successive Junes. The scholarships may be held throughout the college course, provided the recipients continue to maintain a high rank in their college work. The holders are required to reside in Brooks Hall, the Barnard hall of residence, or, by special permission, in the Alumnæ Coöperative Dormitory. Ordinarily, one of each will be awarded each year. In 1919 four of each will be awarded.

Lucille Pulitzer Scholarships (for annual income, see below) 14

Founded by the late Joseph Pulitzer in memory of his daughter, Lucille Pulitzer.

Eight Residence Scholarships, four of which carry an income of \$600 a year apiece and four an income of \$300, are open to women who are not residents of New York City or its vicinity. They are awarded on the same terms as the Carpentier Residence Scholarships listed above. One \$600 and one \$300 scholarship will be awarded each year.

Three New York City Scholarships are awarded to students entering the College from the city of New York who are found to have passed excellent entrance examinations and to be worthy of financial aid. They may be held for the first three years of the college course only.

The first (a), founded in 1899, carries an annual income of \$400 and will be awarded in 1921, 1924, and corresponding years.

The second and third, given in 1903, carry annual incomes of \$325 each; (b) will be awarded in 1919 and 1922, (c) in 1920 and 1923, and corresponding years.

One Competitive Freshman Scholarship (\$200) is awarded annually on the merits of the entrance examinations and on the candidate's general character. It may be held for one year only.

Two Tuition Scholarships (\$200 each) may be awarded to students

- of any class who have shown exceptional scholarly ability and who are in need of assistance.
- Jessie Kaufmann Scholarship (\$170) I
Founded in 1902 by Mr. Julius Kaufmann in memory of his daughter, Jessie Kaufmann. Awarded on the merits of the entrance examinations to a student who, after careful investigation, is found to have no relative able to assist her financially. It may be held for the entire college course.
- Martha T. Fiske Scholarship (\$200) I
Founded in 1911 by Miss Anna E. Smith, in memory of her sister, Mrs. Martha T. Fiske-Collord. It is awarded, on the basis of scholarly ability and general character, to some deserving candidate not a resident of New York City or its suburbs, and may be held throughout the college course, provided the recipient continues to maintain a satisfactory standing.
- Eleonora Kinnicutt Scholarship (\$200) I
Founded in 1911 in memory of Mrs. Francis P. Kinnicutt, who was a Trustee of Barnard College. It is awarded at the end of the freshman year to a student of exceptionally high standing, and may be held for three years, provided the recipient continues to maintain a high rank. It will be awarded in 1921 and 1924.
- Emma A. Tillotson Scholarship (\$200) I
Founded in 1910 by the late Mrs. Luther G. Tillotson. It is awarded at the end of the freshman year to a student of exceptionally high standing, and may be held for three years, provided the recipient continues to maintain a high rank. It will be awarded in 1919 and 1922.
- William Moir Scholarships (\$200 each) 2
Founded in 1912 by the late Mrs. William Moir, in memory of her husband.
The first (a) is awarded at the end of the freshman year to a student of exceptionally high standing who is in need of assistance, and may be held for three years, provided the recipient continues to maintain a high rank. It will be awarded in 1920 and 1923.
The second (b) may be awarded to a student of any class who has shown exceptional scholarly ability and who is in need of assistance.

NON-COMPETITIVE SCHOLARSHIPS

- These, subject to the general regulations for scholarships, are as follows:
- Ella Weed Scholarship (\$155) I
Founded in 1895 by the pupils of Miss Anne Brown's School in memory of Miss Ella Weed, who was chairman of the Academic Committee of the Board of Trustees of Barnard College during the first five years of its existence.
- Veltin School Scholarship (\$150) I
Founded in 1905 by the alumnae of Mlle. Veltin's School.

- Jennie B. Clarkson Scholarship (\$150) I
 Founded in 1898 by the late Mrs. W. R. Clarkson.
- Emily James Smith Scholarship (\$120) I
 Founded in 1899 by Miss Emily H. Bourne in honor of Miss Smith, then Dean of Barnard College. It is awarded in conference with the founder.
- Anna E. Barnard Scholarship (\$150) I
 Founded in 1899 by Miss Emily H. Bourne in honor of Mrs. John G. Barnard. It is awarded in conference with the founder.
- Brearley School Scholarship (\$120) I
 Founded in 1899 by pupils and former pupils of the Brearley School.
- Eliza Taylor Chisholm Memorial Scholarship (\$120) I
 Founded in 1901 by the Alumnae Association of Miss Chisholm's School, which Association reserves the privilege of precedence for such candidates as it may recommend.
- Graham School Scholarship (\$120) I
 Founded in 1907 by the Graham Alumnae Association.
- Mrs. Donald McLean Scholarship (\$150) I
 Founded in 1906 by the New York Chapter of the Daughters of the American Revolution. It is awarded, in conference with a representative of the Chapter, to a deserving student who agrees to pursue the study of history (chiefly that of the United States) continuously throughout her college course.
- Emma Hertzog Scholarship (\$150) I
 Founded in 1904 by gifts from residents of Yonkers, N. Y. It is awarded, in conference with the Faculty of the Yonkers High School, to a graduate of that school who is entering Barnard College.
- Mrs. Henry Clarke Coe Scholarship (\$160) I
 Founded in 1910 by the National Society of New England Women, now the New York City Colony of the National Society. It is awarded, on the nomination of the chairman of the Scholarship Committee of the New York City Colony, to a student from New England or of New England parentage, and after the award is once made the Society requires from the beneficiary full obedience to discipline and the highest ideals of scholarship. This may be awarded to an entering freshman.
- Mary Barstow Pope Scholarship (\$210) I
 Founded in 1913 in memory of Mary Barstow Pope, sometime teacher in Miss Chapin's School, by her friends, her fellow-teachers, and her pupils. It is open to any undergraduate of Barnard College for the whole or any part of her course, and is awarded on the nomination of a self-perpetuating committee representing the founders.
- Charles E. Bogert Memorial Scholarship (\$200), and
 Anna Shippen Young Bogert Memorial Scholarship (\$250) 2
 Founded in 1913 by the late Mrs. Annie P. Burgess. They are awarded to worthy and deserving students of good Christian character who are unable to pay their own expenses.

Martha Ornstein Brenner Scholarship (\$180)	I
Founded in 1915 by her friends in memory of Martha Ornstein Brenner, 1899.	
Barnard School Alumnae Scholarship (\$160)	I
Founded in 1916 by the alumnae of the Barnard School for Girls. It may be awarded to a student in any class, preference being given to nominees of the school.	
Lucille Pulitzer Supplementary Scholarships (\$50 each)	44
Founded by the late Joseph Pulitzer in memory of his daughter, Lucille Pulitzer. They are awarded to worthy and needy students, and may be used to supplement larger scholarships or themselves combined into scholarships of \$100 or more. The money is applicable to tuition fees, residence fees, or, in special cases, general outside expenses.	

SPECIAL FUNDS FOR THE AID OF NEEDY AND
DESERVING STUDENTS

- Arthur Brooks Fund.
A fund of \$5000, given in 1897 by Miss Olivia E. Phelps Stokes as a memorial to the Reverend Arthur Brooks, D.D., Rector of the Church of the Incarnation and Chairman of the Board of Trustees of Barnard College during the first six years of its existence.
- Fiske Scholarship Fund.
A fund of \$5000 given by the late Mrs. Martha T. Fiske-Collord, the income of which is placed at the disposal of the Dean of Barnard College.
- George W. Smith Scholarship Fund.
A fund of \$5000 given in 1906 by the late Mrs. Martha T. Fiske-Collord as a memorial to Mr. George W. Smith, who was a Trustee of Barnard College. The income of the fund is placed at the disposal of the Dean of the College.
- Charles Stewart Smith Scholarship Fund.
Established in 1911 in memory of the late Charles Stewart Smith, who was a Trustee of Barnard College. It provides an annual income of \$250, which is used to assist needy and deserving students.
- Mary Gertrude Edson Aldrich Scholarship Fund.
A fund of \$1000 given by Mrs. James Herman Aldrich. The income is used to assist in her senior year a student who has shown in her college life the moral qualities which go to the making of fine womanhood.
- Scholarship Fund.
A fund of \$9680, established by general subscription through the Scholarship Committee of the Board of Trustees.
- Carpentier Scholarship Fund.
A fund of \$200,000, the bequest of the late Horace W. Carpentier. The income remaining after the payment of the Carpentier Residence Scholarships described on page 67 is placed at the disposal of the Dean for distribution in scholarships of varying amounts, according to the needs of deserving students.

Caroline Church Murray Fund.

A fund of \$5000 established in 1918 by George Welwood Murray in memory of Caroline Church Murray. The income is placed at the disposal of the Dean, to be used in aid of needy and deserving students.

STUDENTS' AID FUND

A Students' Aid Fund is maintained by the Associate Alumnae. From this fund loans are made at a low rate of interest to students in need of financial assistance. The loans and interest are to be repaid within five years after graduation. Under the rules of the Students' Aid Committee, no money may be granted to a freshman in the first winter or spring session; it may be granted in the second only in exceptional cases. The chairman of the Committee, to whom inquiries should be addressed, is Miss Mabel Parsons, Hotel San Remo, New York City.

CAROLINE DUROR MEMORIAL GRADUATE FELLOWSHIP

Established by an anonymous donor in 1912. It is of an annual value of \$600. The holder is to pursue a year of graduate study at Columbia or any other university or college of approved standing. This Fellowship is awarded each year as an academic honor to that member of the graduating class of Barnard College, who, in the opinion of the Faculty, shows most promise of distinction in her chosen line of work. Should the recipient prove in no need of financial assistance, she may retain the title and honor but resign the income, which will then be used for other fellowships or scholarships. This Fellowship is not to be applied for, but is awarded each year as soon as possible after the mid-year examinations. Students who have graduated in February are eligible, as well as those who are to graduate in June.

PRIZES

The following prizes are awarded annually, on the recommendation of the appropriate departments of the Faculty of Barnard College, in accordance with the special conditions named below. No prize will be awarded to any student who falls below grade C in any course during the year in which she is a competitor.

Herrman Botanical Prize.—A prize of \$50, founded by the late Mrs. Esther Herrman, is awarded annually to the most proficient undergraduate student in botany.

Kohn Mathematical Prize.—A prize of \$50, founded by Mrs. S. H. Kohn, is awarded annually to a senior for excellence in mathematics. Competitors for this prize must have pursued mathematics continuously during their college course.

The Jenny A. Gerard Medal.—The Jenny A. Gerard Gold Medal, given in 1908 by the Society of the Colonial Dames in America in memory of Mrs. James Gerard, late President of the Society, is awarded annually to the under-

graduate student of American birth in Barnard College who is most proficient in American Colonial History.

Speranza Prize in Italian.—A prize of \$50, founded by a former student in memory of the late Carlo Leonardo Speranza, Instructor and Professor of Italian at Barnard from 1890 until 1911, is awarded annually to a student in Barnard College for excellence in Italian.

Von Wahl Prize.—A prize consisting of the income of a fund of \$1300, founded in 1915 in memory of Constance von Wahl, 1912, President of the Undergraduate Association, is awarded annually to that member of the graduating class who, in the opinion of the Faculty and of her fellow-students, has rendered the highest type of service to the College.

Caroline Gallup Reed Prize.—A prize consisting of the income of a fund of \$1000, founded in 1916 by Mrs. William Barclay Parsons in memory of her mother, Mrs. Sylvanus Reed, for the recognition of special study in the subject of the origin of Christianity and early Church history, is awarded annually to the student who shows the highest excellence in this field of work. The award is made partly on the basis of an examination and partly on the basis of an essay to be handed in by May 1. A syllabus of the period to be covered may be obtained from the Chaplain of the University.

Jean Willard Tatlock Memorial Prize.—A prize consisting of the income of a fund of \$1250 founded in 1917 by her friends in memory of Jean Willard Tatlock, 1895, is awarded annually to the undergraduate student most proficient in Latin.

The following prizes of Columbia University are by their terms open to students of Barnard College.

Bennett Prize.—A prize established through a gift of \$1000 from James Gordon Bennett may be awarded by the Faculty of Political Science for the best essay upon some subject of contemporary interest in the domestic or foreign policy of the United States. The competition is open to students not holding a baccalaureate degree who pursue courses amounting to six hours a week in the School of Political Science. The subject for the essay to be handed in May 1, 1920, is 'The Operation of the Direct Primary in New York City'.

The Bunner Medal.—The H. C. Bunner Gold Medal, established by the friends of the late Henry Cuyler Bunner, is awarded annually at Commencement to the candidate for a Columbia degree who shall present the best essay on an assigned subject in American literature. The award will be made by a committee to be appointed by the President. The subject for the essay to be handed in May 1, 1920, is 'American Comedy since 1875'.

Earle Prize in Classics.—A prize of \$50, established in memory of Mortimer Lamson Earle, Instructor in Greek in Barnard College from 1889 to 1895 and from 1898 to 1900, and Professor of Classical Philology from 1900 to 1905, is open for annual competition to all candidates for the degree of Bachelor of Arts. It is awarded partly on the basis of the regular work of the year in Greek and in Latin, partly on the basis of a special examination. The special examination covers specified portions of Greek and Latin literature, sight reading in Greek and in Latin, and prose composition in Greek and in Latin. The special subjects for 1920 are Homer, *Iliad*, Books 16, 17, 19, 20, 21, 22 (3681 lines to be read in Greek);

and the subject matter of Books 9, 11, 18, 23, 24; and Sallust, *Bellum Iugurthinum*.

For the award in 1920, the examination will be held in January. Students are urged to do much of their work for the examination during the preceding summer vacation.

The Caroline Phelps Stokes Prize.—The Caroline Phelps Stokes Prize of \$40 is awarded annually at Commencement to that student who, having been regularly enrolled in Columbia College or Barnard College or Teachers College as a candidate for an academic degree, for not less than two sessions, winter or spring, shall be deemed to have written the best essay upon an assigned topic bearing upon the rights of man. The subject for the essay to be handed in May 1, 1920, is 'The Rights of Man as applied to the question of the Self-Determination of Peoples'.

HONORS

Departmental Honors.—Departmental honors are awarded for high excellence in the work of any department, under the following regulations:

No honors shall be awarded to freshmen or special students or to any student whose work falls below C in any course taken by her in the year of her candidacy. A candidate's standing in a course that is dropped, and also the general quality of the work of a student during the year of candidacy, may be taken into consideration by the Committee in the award of honors.

No honors shall be awarded to students on elementary courses only and in no case may more than one full-year elementary course be counted in the total necessary for honors. At least 6 points of work in the honor subject must be taken in the year of candidacy.

First year honors in any department shall be awarded at the end of any year to any student, of at least sophomore standing, who has taken at least 12 points of work in that department, of which 12 points at least 6 points shall be of grade A and none below grade B, and who has done extra work required by the department, and who is certified by the department as worthy of honors.

Second year honors in any department shall be awarded to a student of at least junior standing, who has taken at least 18 points of work in that department, of which 18 points at least 12 points shall be of grade A and none below grade B, who has done extra work required by the department, and is certified by the department as worthy of honors.

Third year honors in any department shall be awarded at graduation to any student who has taken at least 24 points of work in that department, of which 24 points at least 18 points shall be of grade A and none below grade B, who has done extra work required by the department, and is certified by the department as worthy of honors.

With the consent of the departments concerned and of the Committee on Honors, part of the 12, 18, or 24 points of work required for departmental honors may be taken in an allied department.

Final honors in any department shall be awarded to any student who has obtained honors in that department for three successive years.

Candidates for honors shall confer with the department concerned in November and shall announce their candidacy in writing to the Registrar between December 1 and December 10 of the academic year in which they wish to take honors.

The amount of extra work required for honors shall correspond approximately to that accepted for one point of regular college credit.

Degrees with Honor.—For general excellence in the work of the college course honors may be awarded at graduation, under the following regulations:

Students entering from other colleges with advanced standing are not eligible to become candidates for a degree with honor until they have completed at Barnard College at least two full years of work.

The Faculty of Barnard College, on the recommendation of the Committee on Honors, may recommend that the degree *CUM LAUDE* be awarded to any student who has obtained grade A in at least 62 points of the work of the college course, and who has not fallen below grade B in more than 31 points of the work of the college course, and who has twice received departmental honors; or to any student who, without receiving departmental honors, has obtained grade A in at least 74 points of the work of the college course, and who has received no grade below C, and who has not received C in more than 12 points of work.

The Faculty of Barnard College, on the recommendation of the Committee on Honors, may recommend that the degree *MAGNA CUM LAUDE* be awarded to any student who has obtained grade A in at least 90 points of the work of the college course, and who has never fallen below grade C, and who has received final honors in some department, or first and second year honors in each of two departments; or to any student who, without receiving departmental honors, has obtained grade A in at least 102 points of the work of the college course and who has received no grade lower than B.

Points of extra credit gained by high standing are not to be counted in these totals.

RESIDENCE HALLS

Brooks Hall, the residence hall for Barnard College students, will open on Monday, September 22, 1919, and will close on Saturday, June 5, 1920. Candidates for admission or students who wish to secure accommodations in Brooks Hall during the week of the June entrance examinations or the September entrance or deficiency examinations should make arrangements directly with the Secretary of the Hall, not later than June 1 or September 1, respectively.

Full information in regard to the situation and cost of rooms, the advance deposit, and the charge for electric light is published in a separate pamphlet, to be had on application to the Secretary of Brooks Hall. All correspondence regarding accommodations in Brooks Hall should be addressed to the Secretary of the Hall, 607 West 116th Street, New York, N. Y. For the dormitory fees see page 55.

The post-office address for residents is Brooks Hall, 607 West 116th Street, New York, N. Y.

A smaller coöperative dormitory in a nearby apartment house is conducted by the Associate Alumnae for the benefit of students wishing to live at the lowest possible cost. The cost of room and board in this dormitory is about \$315 a year.

Inquiries should be addressed to Miss Mabel Parsons, Hotel San Remo, New York City.

For regulations in regard to the residence of students who do not live in Brooks Hall or the Alumnae Coöperative Dormitory, see page 16.

HEALTH AND PHYSICAL TRAINING

The University Medical Officer, Dr. William H. McCastline, and the College Physician, Dr. Gulielma F. Alsop, supervise the sanitation of the College and give personal advice to the students concerning their health. A trained nurse, who lives in Brooks Hall, works under their direction in promoting the health of both resident and non-resident students.

The new Students Hall contains a gymnasium, swimming-pool, and exercise rooms. The students have also, on Milbank Quadrangle, a practice field for basketball and tennis courts. A physical examination is required of each student upon entrance. On the basis of this examination advice is given as to the kind and amount of exercise best adapted to her needs, and in many cases recommendations are made to the Committee on Instruction regarding the amount and arrangement of her program of studies. Each student must also consult with the department at least once a month during her college course. As far as possible the work in physical education is conducted in the open air.

THE UNIVERSITY LIBRARY

The General Library of the University contains about 686,000 volumes, exclusive of unbound pamphlets and doctoral dissertations. The various departments of instruction have also special libraries in connection with their lecture-rooms and laboratories. The Avery Architectural Library, the Law Library, the Ella Weed Library of Barnard College, the Bryson Library of Teachers College, and the libraries of the College of Physicians and Surgeons and the College of Pharmacy, are all available to students of the University.

For the convenience of the undergraduates of Barnard College there is maintained in the Ella Weed Library in Students Hall a carefully selected collection of reference books of about 12,800 volumes.

UNIVERSITY PRESS BOOKSTORE

A University bookstore is maintained in the building of the School of Journalism under the auspices of the Columbia University Press, where officers and students may purchase books and stationery at stated discounts from list prices.

ASSEMBLY AND CHAPEL

Beginning in September, 1919, a University or College assembly is to be held every Tuesday at one o'clock. All students are expected to attend.

There will also be on Fridays at noon chapel services lasting about twenty minutes, at which attendance is voluntary.

In St. Paul's Chapel, the chapel of Columbia University, service is held every week-day except Saturday at 12 o'clock and on Sunday afternoon at 4 o'clock. At these services also attendance is voluntary.

A special University service is held in St. Paul's Chapel on the Wednesday preceding the Thanksgiving recess.

STUDENT ORGANIZATIONS

Under the system of self-government in use in the College, the various student organizations are supervised by the Student Council, subject to the general approval of the Faculty. The Council controls the schedules of meetings and entertainments and administers rules of eligibility for office-holding and participation in college plays.

STATISTICS

	1889 to 1890	1894 to 1895	1899 to 1900	1904 to 1905	1905 to 1906	1906 to 1907	1907 to 1908	1908 to 1909	1909 to 1910	1910 to 1911	1911 to 1912	1912 to 1913	1913 to 1914	1914 to 1915	1915 to 1916	1916 to 1917	1917 to 1918	1918 to 1919
UNDERGRADUATES, REGULAR:																		
Seniors . . . . .	..	9	40	83	81	63	59	68	62	53	72	86	*97	*123	†93	144	131	102
Juniors . . . . .	..	18	40	71	78	110	116	108	122	144	154	144	147	110	160	143	150	167
Sophomores . . . . .	..	18	37	75	97	88	95	114	109	115	132	155	132	191	169	177	155	161
Freshmen (regular)	4	26	54	110	111	130	135	161	188	185	226	184	252	240	211	194	211	234
Freshmen (partly regular)	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	14	71	171	339	367	391	405	451	481	497	584	569	628	664	633	658	647	664
SPECIAL STUDENTS:																		
Matriculated . . . . .	..	..	21	27	18	22	35	25	24	26	20	16	22	32	28	35	27	29
Non-matriculated . . . . .	..	..	..	..	5	6	13	22	30	24	36	33	34	32	33	41	23	22
Departmental (1889-1896)	22	29	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Music students (1896-1904, 1914-1915) . . . . .	..	..	41	..	..	..	..	..	..	..	..	..	..	5	..	..	..	..
	22	29	62	27	23	28	48	47	54	50	56	49	56	69	61	76	50	51
GRADUATE STUDENTS (1890-1900) . . . . .	..	19	82	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTAL STUDENTS PRIMARILY REGISTERED AT BARNARD	36	119	315	366	390	419	453	498	535	547	640	618	684	733	694	734	697	715
STUDENTS FROM COLUMBIA UNIVERSITY . . . . .	..	..	..	62	57	40	38	36	59	62	59	45	41	28	18	31	33	18
STUDENTS FROM TEACHERS COLLEGE . . . . .	..	..	18	77	95	165	167	182	200	201	146	136	*125	*108	46	37	59	33
STUDENTS FROM SCHOOL OF PHILANTHROPHY . . . . .	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	1	..

TOTAL STUDENTS FROM OTHER PARTS OF THE UNIVERSITY . . . . .	..	..	18	139	152	205	205	218	259	263	205	183	167	136	64	68	93	51
TOTAL REGISTRATION	36	119	333	505	542	624	658	716	794	810	845	801	851	869	758	802	790	766
DEGREES CONFERRED:																		
A.B. . . . .	..	8	39	83	75	76	97	98	88	103	114	136	113	141	112	136	142	..
B.S. . . . .	..	..	..	..	..	..	..	..	2	..	4	3	7	8	6	20	15	..
A.M. (1894-1900) . . . . .	..	1	18	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ph.D. (1895-1900) . . . . .	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

TOTAL BACHELORS' DEGREES CONFERRED 1893-1918: A.B., 1885; B.S., 65.
* In 1913-14, 18 and in 1914-15, 3 Barnard seniors registered at Teachers College for the professional diploma are included in the senior figures and not among the Teachers College students.
† In 1916-17, 1 Barnard senior registered in the 3d year of the Journalism course is included.

DEPARTMENTAL STATEMENTS

The following general regulations apply to all courses. The paragraphs on "The Program of Studies," pp. 56-60, should be carefully read.

When an announced course has not been applied for by at least three candidates for a degree, the instructor may withdraw it.

Where the hours for laboratory work are not given either in the departmental statement or in the scheme of attendance, they must be arranged after consultation with the officer in charge of the course.

Courses designated by capital letters are prescribed. Elective courses are designated by numbers, odd numbers indicating the winter session and even numbers, the spring session. A compound course is therefore designated by an odd number and the succeeding even number. The numbers from 1 to 99 inclusive are given to courses open only to undergraduates; the numbers from 101 to 199 inclusive are given to courses open to both undergraduates and graduates; the lower numbers in each case being used for the introductory courses.

A Roman numeral in parentheses after the hour, indicates the section number (*e. g.*, M., W., and F. at 9 (I), at 10 (II) etc.).

In the statement of each course the prerequisites are indicated. When no department is named it is to be assumed that the reference is to a numbered course in the same department. *No credit in points will be given for a course which is taken subsequent to the course or courses for which it is in any way a prerequisite, though not formally so announced. Courses must be taken for the credit value announced—for no more or no less.*

A hyphenated course (*e. g.*, History A1-A2) is regarded as a full-year course of which the first half is always assumed to be a prerequisite for admission to the second half, and, except for reasons of weight, and with the written consent of the instructor, no credit will be given for work dropped at the mid-years or before the completion of the course. A course of which the index signs are separated by a comma (*e. g.*, English 1, 2) is regarded as a divisible course of which the first half may be taken separately. *Admission to the second half of a divisible course is granted only when all the prerequisites have been met and the written consent of the instructor obtained.*

Courses marked with an asterisk (*) are given at Columbia University (*cf.* p. 60).

Courses marked with a dagger (†) are given at Teachers College. *Work at Teachers College mentioned herein may be pursued only by regularly enrolled students of Barnard College and only when counting for a Barnard College degree. Certain courses not here specified as being open at Teachers College may, through the courtesy of Teachers College and with the consent of the Committee on Instruction, be taken by such students. All special students of whatever class should enroll at Teachers College for Teachers College courses.*

For further detailed information in regard to topics, text-books, or methods in any particular course, students are referred to the instructors.

INTRODUCTORY COURSES

1, 2—Introduction to the Study of the Science of Language. Professors GERIG and STURTEVANT; Professors AYRES and BOAS. 4 points.

Tu. and Th. at 2.

Open to all excepting freshmen. Either half of this course may be taken separately.

In these courses the principles of the historical development of languages, and the psychological processes that are manifested in the structure of language will be discussed. The courses aim to meet the needs of students of English, Romance, German, and classical languages, and of others who are interested in studying the formation and development of human speech.

ANTHROPOLOGY

1, 2—Introduction to Anthropology. Professor BOAS. 8 points.

M., W., and F. at 1, and weekly conferences at hours to be arranged.

Open to all excepting freshmen. Either half of this course may be taken separately.

The Early History of Mankind.—In this course will be discussed the earliest appearance of man, the prehistoric history of Europe, the distribution and relations of European languages, the relations of early European civilization to civilizations of other continents, and the development of modern nationalities. Then the distribution of the principal cultural types of other continents will be treated in concise form.

Courses 1, 2 and 3, 4 are given in alternate years.

[3, 4—Introduction to Anthropology. Professor BOAS. 8 points.

Open to all excepting freshmen. Either half of this course may be taken separately.

Social Psychology.—In this course will be treated the relation between race and mental activity; the psychological basis of cultural dissemination, of independent origin of similar ideas, and of convergence of different ideas in various parts of the world; the psychological conditions of inventions, those underlying various types of social organization and of belief.

Not given in 1919-20.]

More advanced courses given at Columbia University are described in the Announcement of the Division of Philosophy, Psychology and Anthropology.

ARCHITECTURE. See **Fine Arts.**

ASTRONOMY

1—General Astronomy, Introductory Course. Professor JACOBY. Lectures, 2 points, with third hour, 3 points.

Tu. at 2 and Th. at 1 and a third hour to be arranged in the evening, at the Wilde Observatory.

2—General Astronomy. Identical in content and credit with Course 1. Professor JACOBY.

Tu. at 2 and Th. at 1 and a third hour to be arranged in the evening, at the Wilde Observatory.

Other courses given at Columbia University are described in the Announcement of the Division of Mathematical and Physical Science.

BOTANY

51-52—Principles of the Morphology and Physiology of Plants. Professor RICHARDS, Miss RUSK and Miss CAREY. 2 lectures, 4 hours of laboratory work. Demonstrations to accompany lectures. 8 points.

Lectures, M. and F. at 10. Demonstrations and conferences, W. at 10. Laboratory work, Tu. and Th., 9-12, Tu., 2-4 and Th., 1-4. A special laboratory

section will be arranged for students who have passed the entrance examination in botany and wish to obtain full credit for the course.

Laboratory fee, \$2.50.

53-54—Comparative Morphology and Development of Plants, Study of Types. Professor HAZEN and Miss RUSK. 2 lectures, 4 or 6 hours of laboratory work. 8 or 10 points.

Tu. and Th. at 10.

Laboratory fee, \$2.50.

Prerequisite, Course 51-52. Course 53-54 is not open to freshmen.

55-56—Structure and Relationship of Flowering Plants. Professor HAZEN. 1 hour lecture or conference, 4 or 6 hours of laboratory work. 3 or 4 points.

Winter session only, Th. at 3.

Laboratory fee, \$2.50.

Prerequisite, Course 51-52, or Entrance Botany.

Course 55-56 will be given during the winter session only in 1919-20.

[58—Principles of Agriculture. Miss RUSK. 2 lectures, 4 hours of laboratory work. 4 points.

Laboratory fee, \$2.50.

Prerequisite, Course 51-52.

Not given in 1919-20.]

151-152—Bacteria and Ferment Fungi. Professor RICHARDS and Miss RUSK. 2 lectures, 6 hours of laboratory work. 10 points.

Tu. and Th. at 4. Laboratory work, M., W., and F., 1-5.

Laboratory fee, \$5.00.

Prerequisite, two years' work in botany and some knowledge of chemistry. Exception may be made for seniors or students intending to enter medical school. Open to students only after consultation with the instructor.

153—Physiological Anatomy of Vascular Plants. Mrs. RICHARDS. 2 lectures, 6 hours of laboratory work. 5 points.

Tu. and Th. at 11. Laboratory work, M. and Th., 1-5, Tu., 2-5, W., 9-12 in so far as possible.

Laboratory fee, \$2.50.

Prerequisite, Course 53-54, or 55-56 except for juniors and seniors on consultation with the instructor.

154—Physiology of Plants from Standpoint of Nutrition. Professor RICHARDS and Mrs. RICHARDS. 2 lectures, a minimum of 6 hours of laboratory work. 5 points.

Tu. and Th. at 11. Laboratory work same as for Course 153.

Laboratory fee, \$2.50.

Prerequisite, Course 153 and some knowledge of chemistry. Open to students only after consultation with the instructor.

Courses 154 and 156 are given in alternate spring sessions.

[156—Physiology of Plants from Standpoint of Growth. Professor RICHARDS and Mrs. RICHARDS. 2 lectures, a minimum of 6 hours of laboratory work. 5 points.

Laboratory fee, \$2.50.

Prerequisite, Course 153 and some knowledge of chemistry. Open to students only after consultation with the instructor.

Not given in 1919-20.]

157—Embryology and Laboratory Methods. Practice in methods of technique, with the study of the embryology of one or more types. Professor HAZEN. 8 hours of laboratory work with occasional lectures and outside reading. 4 points.

Hours to be arranged.

Laboratory fee, \$2.50.

Prerequisite, except for seniors, Course 153; parallel, Course 154 or 156. Open to students only after consultation with the instructor.

[158—Structure and Development of Algæ. Advanced course. Professor HAZEN. 1 lecture, 6 or 8 hours of laboratory work. 4 or 5 points.

Hours to be arranged.

Laboratory fee, \$2.50.

Prerequisite, Courses 51-52 and 53-54.

Not given in 1919-20.]

159—Structure and Development of Fungi. Advanced Course. Professor RICHARDS. 1 lecture, 6 or 8 hours of laboratory work. 4 or 5 points.

Hours to be arranged.

Laboratory fee, \$2.50.

Prerequisite, Courses 51-52 and 53-54.

161, 162—Advanced Physiology and Morphology. Professors RICHARDS and HAZEN, and Mrs. RICHARDS.

Laboratory fee, \$2.50 for each course.

Work will be arranged to suit the needs of the students, and credit will be given according to the amount accomplished.

Open to students only after consultation with the instructor. With the permission of the instructor this course may be taken in successive years.

CHEMISTRY

5-6—General Inorganic Chemistry. Professors REIMER and KELLER, Dr. RICE, Miss KOENIG, and Miss ———. 3 lectures, 2½ hours of laboratory work. 8 points. Students intending to enter a medical school should take this course with 5 hours of laboratory work, half of which must be on M., 10 points.

M., W., and F. at 11. Laboratory work, Tu., W., or Th., 2-4:30. In order to obtain full credit for the course, students who have passed the entrance examination in chemistry must take the special laboratory course on M., 2-4:30.

Laboratory fee, \$8.00. (For pre-medical students, \$12.00.)

63, 64—Qualitative and Quantitative Analysis. Professor KELLER. 3 lectures, 6 hours of laboratory work. 12 points.

Tu. and Th. at 10 and F. at 1. Laboratory work, Tu., 2-5, and Th., 1-4; M. and W., 1-4.

Laboratory fee, \$18.00.

Prerequisite, Course 5-6.

65, 66—Quantitative Analysis, Advanced Course. Professor KELLER. 1 lecture, 6 hours of laboratory work. 8 points.

Th. at 1. Laboratory work, Tu. and Th., 9-12.

Laboratory fee, \$20.00

Prerequisite, Course 63, 64.

This course will be given for a class of five or more.

41-42—Organic Chemistry. Professor REIMER. 3 lectures, a minimum of 6 hours of laboratory work. 12 points.

Tu. and Th. at 9 and F. at 2. Laboratory work, M. and W., 1-5, Tu. 2-5.

Laboratory fee, \$25.00.

Prerequisite, Courses 5-6 and, except for reasons of weight, 63, 64.

42a—Elementary Organic Chemistry. Short course, intended primarily for pre-medical students. Dr. RICE. 3 lectures, a minimum of 6 hours of laboratory work. 6 points.

Tu. and Th. at 10 and F. at 1. Laboratory work, Tu., 2-5 and Th., 1-5.

Laboratory fee, \$12.00.

This course may be taken parallel to Course 6 and will be given for a class of five or more.

105-106—Inorganic Chemistry, Advanced Course. Professor KELLER. 3 lectures, a minimum of 6 hours of laboratory work. 12 points.

M., W., and Th. at 1. Laboratory work, Tu. and Th., 9-12.

Laboratory fee, \$25.00.

Prerequisite, Course 5-6, 63, 64, 41-42, and Physics 1-2, or 11-12.

This course is designed to supplement Course 63, 64.

[145-146—Organic Chemistry, Advanced Course. Professor REIMER. 3 lectures, a minimum of 6 hours of laboratory work. 12 points.

Laboratory fee, \$25.00.

Prerequisite, Courses 5-6, 41-42, 63, 64.

Not given in 1919-20.]

Journal Club. 1 hour. The instructors and the advanced students meet for reports and discussion on recent scientific papers.

CLASSICAL PHILOLOGY

Classical Civilization

51—Greek Life and Thought; a survey of Greek civilization. Professor VAN HOOK. 2 points.

Tu. and Th. at 10.

Open to all students.

52—Greek Art. Professor YOUNG. 2 points.

Tu. and Th. at 10.

Open to all students.

53, 54 (old number 51, 52)—Roman Life and Thought; a survey of Roman civilization. Professor KNAPP. 4 points.

Tu. and Th. at 2.

Open to all students. Either half of this course may be taken separately.

55, 56—Greek Literature in Translation. Mrs. PUTNAM. 4 points.
Tu. and Th. at 11.

Open to all students.

This course may not be begun in the spring session.

57, 58—Latin Literature in Translation. Professor KNAPP. 4 points.
M. and W. at 3.

Open to all students. Either half of this course may be taken separately.

59—Greek and Roman Philosophy in Translation. Dr. MESSER. 3 points.
M., W., and F. at 9.

Open to all students.

See also **History 7-8**, The History of Greece to the Roman Conquest; **History 9-10**, The History of Rome to the Disruption of the Empire; and **History 73**, a course on Greek and Roman Theories of Life and Conduct; and **Introduction to the Study of the Science of Language**, page 79.

Greek

1-2—Elementary Course. Grammar, Composition, Selected Readings in Prose, Homer's Iliad. Professor HIRST. 3 recitations, 2 hours unprepared work in class-room. 8 points.

M., Tu., W., Th., and F. at 2. (The adjustment of the Tu. hour will be made before the spring session begins.)

This course may not be begun in the spring session.

11 (old number 5)—Homer: Odyssey; and Lucian: Selections. Professor PERRY. 3 points.

M., W., and F. at 10.

Prerequisite, Course 1-2, or Elementary Entrance Greek.

12 (old number 6)—Plato: Apology; and Euripides: Alcestis. Professor PERRY. 3 points.

M., W., and F. at 10.

Prerequisite, Course 1-2, or Elementary Entrance Greek.

19-20 (old number 9-10)—Prose Composition. First Course. Dr. MESSER. 2 points.

Hour to be arranged.

May be taken in connection with any other course (except 1-2), but not separately, except by special permission; especially recommended to students who have taken only Course 1-2.

21 (old number 12)—Herodotus: Selections. Professor HIRST. 3 points.
M., W., and F. at 9.

Prerequisite, Advanced Entrance Greek, or Course 11 or 12.

22 (old number 11)—Euripides and Sophocles. Dr. MESSER. 3 points.
M., W., and F. at 9.

Prerequisite, Advanced Entrance Greek, or Course 11 or 12.

25—Greek Tragedy. Dr. MESSER. 2 points.

Tu. and Th. at 11.

Prerequisite, Advanced Entrance Greek, or Course 11 or 12.

Two plays, selected in accordance with the needs of the class, will be read.

26 (old number 16)—Aristophanes: Frogs and Clouds. Professor VAN HOOK. 2 points.

Tu. and Th. at 11.

Prerequisite, Advanced Entrance Greek, or Course 11 or 12.

39-40—Advanced Prose Composition. Professor VAN HOOK. 2 or 4 points.

Hour to be arranged.

Prerequisite, Course 9-10.

May be taken in connection with any other course, but not separately, except by special permission.

41, 42—Greek Literature; general survey, with extensive reading of numerous authors, mostly poets. Professor VAN HOOK. 6 points.

M., W., and F. at 2.

Prerequisite, Courses 21, 22, or 25, 26.

See above under **Classical Civilization**, page 82.

Latin

1-2—Elementary Course. Grammar, Composition, Selected Readings in Prose and Verse. Miss GOODALE. 3 recitations, 2 hours unprepared work in class-room. 8 points.

M., T., W., Th., and F. at 2.

Open to all students who have not offered Latin at entrance.

This course may not be begun in the spring session.

The aim of the course will be to cover somewhat more than the work of the first two years in Latin of the four-year high school course.

3—Selections, especially from Ovid and Vergil. Professor KNAPP. 3 points.

M., W., and F. at 2.

Prerequisite, Course 1-2, or its equivalent.

The aim of the course will be to complete the Latin work of the four-year high school course.

11 (old number A1)—Livy: Selections; Catullus. Dr. MESSER and Miss GOODALE. 3 points.

M., W., and F. at 1 (I); Tu. and Th. and S. at 9 (II).

Prerequisite, Courses 1-2, 3, or their equivalent in Entrance Latin.

Conditioned students should elect Section I of Course 11, 12.

12 (old number A2)—Horace: Selected Odes and Epodes. Dr. MESSER and Miss GOODALE. 3 points.

M., W., and F. at 1 (I); Tu., Th., and S. at 9 (II).

Prerequisite, Courses 1-2, 3, or their equivalent in Entrance Latin.

14 (old number A6)—Livy. Identical in contents and credit with Course 11. Miss GOODALE.

M., W., and F. at 9.

Prerequisite, Courses 1-2, 3, or their equivalent in Entrance Latin.

15 (old number A7)—Horace. Identical in contents and credit with Course 12. Miss GOODALE.

M., W., and F. at 9.

Prerequisite, Courses 1-2, 3, or their equivalent in Entrance Latin.

17, 18 (old number A3, A4)—Selections from Latin Literature, representing characteristic aspects of Roman life and thought. Dr. MESSER. 6 points.

Tu., Th., and S. at 10.

Prerequisite, Courses 1-2, 3, or their equivalent in Entrance Latin.

19-20 (old number 9-10)—Prose Composition. First Course. Miss GOODALE. 2 points.

Hour to be arranged (two sections).

May be taken in connection with any other course, but not separately, except by special permission.

21 (old number 11)—Horace: Satires and Epistles. Professor KNAPP. 3 points.

M., W., and F. at 1.

Prerequisite, Advanced Entrance Latin or Course 11, or 12, or 14, or 15, or 17, or 18.

22—Juvenal; Martial; Pliny. Professor HIRST. 3 points.

M., W., and F. at 1.

Prerequisite, Advanced Entrance Latin or Course 11, or 12, or 14, or 15, or 17, or 18.

25—Plautus and Terence. Professor LODGE. 2 points.

Tu. at 2, and Th. at 1.

Prerequisite, Advanced Entrance Latin, or Course 11, or 12, or 14, or 15, or 17, or 18.

26—Tacitus: Selections from Annales XIII-XVI. Professor HIRST.

Tu. at 2, and Th. at 1.

Prerequisite, Advanced Entrance Latin, or Course 11, or 12, or 14, or 15, or 17, or 18.

29-30—Prose Composition. Second Course. Professor HIRST. 2 points.

Hour to be arranged.

Prerequisite, Course 19-20.

May be taken in connection with any other course, but not separately, except by special permission.

41, 42—Latin Literature; general survey, with extensive reading of various authors. Professor KNAPP. 6 points.

Tu. and Th. at 3, and a third hour to be arranged. (All three hours will be arranged, if necessary.)

Prerequisite, Courses 21, 22, or 25, 26.

*** 139-140—Prose Composition. Advanced Course.** Professor MCCREA. 4 points.

Hour to be arranged.

Prerequisite, Course 29-30.

Open to specially qualified seniors.

See also under **Classical Civilization**, page 82.

ECONOMICS AND SOCIOLOGY¹

A1-A2—Outlines of Economics. Professors OGBURN and HUTCHINSON, and Mrs. BAKER. 6 points.

M., W., and F. at 9 (I), at 10 (II), at 11 (III); Tu., Th., and S. at 9 (IV), at 10 (V).

Prescribed for juniors and open to specially qualified sophomores.

1-2—Introduction to Sociology. Professor OGBURN. 6 points.

M., W., and F. at 11.

Open to juniors and seniors.

[9-10—Problems and Methods of Volunteer Social Work. Professor HUTCHINSON. 2 points.

Open to seniors with the special permission of the department.

Not given in 1919-20.]

11-12—Women in Gainful Occupations. Professor HUTCHINSON. 6 points.

M., W., and F. at 10.

Prerequisite, Course A1-A2.

111—Public Health. Professor CHADDOCK. 2 points.

Tu. and Th. at 10.

Prerequisite, Course A1-A2.

112—Social Statistics. Professor CHADDOCK. 2 points.

Tu. and Th. at 10.

Prerequisite, Course A1-A2.

For courses in Finance, the Labor Problem, the Trust, and Corporation Problem, Principles and Methods of Statistics, and the History of Socialism, offered at Columbia University and open, under certain conditions, to specially qualified juniors and seniors, students must obtain the approval of the Barnard Department. For a description of these courses, see the Announcement of the Division of Economics, History and Public Law.

EDUCATION

Course A is prerequisite to all other courses in Education. Course B should be taken before, or parallel with, all more advanced courses.

Specially qualified seniors who have obtained the permission of the Dean of Barnard College to take courses in Education counting towards the Teachers College Diploma should arrange to pursue if possible during the senior year Courses 281, and 283 or 284, and a methods course in the teaching of their major subject and a unit course in the teaching of a second academic subject. For requirements for the Teachers College Diploma, see p. 62.

† **A—Educational Psychology.** Professor WHITLEY. 3 points.

Winter session only: M., W., and F. at 10 (II).

Spring session only: M., W., and F. at 9 (III), at 10 (IV).

Prerequisite, Psychology A.

† **B—History and Principles of Education.** Professor GOODSSELL and Dr. REISNER. 6 points.

M., W., and F. at 3 (I); Tu., Th., and S. at 10 (II). (One section may be withdrawn, unless registration is sufficiently heavy to require two sections.)

Prerequisite, Course A.

† **281—Conduct of the Recitation in Secondary Schools.** Professor STEVENS. 2 points.

M. and W. at 2 (I); at 4 (II).

Prerequisite or parallel, Course B.

¹ In the reckoning of points for major subjects, Economics and Sociology may be counted as one subject.

† 283 (or † 284)—**Supervised Observation and Teaching.** Professor STEVENS, Miss STURTEVANT, and Mr. MORRISON. 2 points, either course.

Either Course 283 or Course 284 may be taken, 283 in the winter or 284 in the spring session.

Conference hour, F. at 4.

Prerequisite or parallel, Course 281.

Specially qualified seniors who desire to be candidates for a Teachers College Diploma may, with the permission of the Dean and the Committee on Instruction of Barnard College, and the appropriate instructor in Teachers College, elect courses in the methods of teaching biological and physical sciences, English, foreign languages, geography, history, and mathematics. In all cases students who wish to take a methods course must arrange for the practical work with the instructor before registration in that course.

For a list of the methods courses and the diplomas of Teachers College students are referred to the Announcement of the School of Education of Teachers College.

ENGLISH

A1, A2 (A4, A5)—Composition. Oral and written exposition and argument; description and narrative. Professors BALDWIN, HALLER and HOWARD, Miss WEEKS, Miss STURTEVANT, and Miss LATHAM. 6 points.

Students may tentatively select one of the following sections, but the Department reserves the right to make any changes necessary.

A1, A2, Tu., Th., and S. at 9 (I), at 10 (II), at 11 (III); M., W., and F. at 9 (IV), at 10 (V), at 11 (VI).

Prescribed for freshmen and prerequisite for any other course except 11, 12, and X1 or X2.

A4, the equivalent of **A1,** is prescribed for students entering college in February; and **A5,** the equivalent of **A2,** is prescribed for these students in the winter session of the following year.

A4, A5, Tu., Th., and S. at 9 (I); M., W., and F. at 11 (II).

Of the following courses, those marked § are not open to sophomores, except by special permission.

Linguistic study to the extent of about 4 points is required of all students making English their major subject. This requirement may be satisfied by any combination chosen from Courses 15, 16, 19, **Introduction to the Study of the Science of Language** (page 79), and from certain other courses approved in special cases.

Every election must have the written approval of the Department.

Composition

1, 2—Short Stories, Short Plays, Essays. Miss STURTEVANT. 6 points.
Tu. and Th. at 10 and a third hour to be arranged.

3, 4—Practise in Writing for Newspapers and Magazines. Special articles on subjects growing out of current events; research articles, short biographies of contemporaries. Analysis of the policies and characteristics of contemporary American periodicals. Professor HOWARD. 6 points.

Tu., Th., and S. at 11.

§ **5, 6—Daily Themes and Essays.** Professor BREWSTER. 6 points.
Tu. and Th. at 10, and a third hour to be arranged.

§ 7, 8—Play-writing. Professor BALDWIN. 6 points.

Tu., 4.10–5.50 and a third hour to be arranged.

Open to a limited number of seniors. Applications should be made two weeks before the date for handing in elections. Though focused on play-writing, the course admits also story-writing and verse-writing, and gives practise in the criticism of manuscripts.

Literature

11, 12—Essentials of Literature. Based on a wide range of reading in prose and verse. Professor HUBBARD. 6 points.

M., W., and F. at 10.

Open only to sophomores and to qualified freshmen with the special permission of the Department.

13, 14—Epic and Romance. European heroic legend, popular ballad, folk tale, Arthurian romance. Miss STURTEVANT. 6 points.

M., W., and F. at 2.

15—The English Language. A study of modern English from the point of view of history and use. Professor KRAPP. 2 points.

Tu. and Th. at 10.

16—Anglo-Saxon. Reading of texts and study of Anglo-Saxon civilization. Professor KRAPP. 2 points.

Tu. and Th. at 10.

19—Chaucer. The language and poetry of Chaucer, the ideas and literary habits of his time. Professor BALDWIN. 3 points.

M., W. and F. at 10.

20—English Literature of the Renaissance and the Reformation. Professor HALLER. 3 points.

M., W., and F. at 10.

23, 24—Survey of English Literature. The masterpieces of English literature from the Renaissance to the present. Professor HOWARD. 6 points.

M., W., and F. at 9.

25, 26—Development of the English Drama. Special study of the Elizabethan period. Miss LATHAM. 6 points.

Tu., Th., and S. at 10 (I); M., W., and F. at 1 (II).

27, 28—Shakspeare. Professor WRIGHT. 6 points.

M., W., and F. at 2.

29, 30—English Poetry from Milton through Dryden. Biographical and critical study of the chief poets and their most significant works, with special emphasis on the career and character of Milton; lectures accompanied by extensive reading. Professor TRENT. 6 points.

M. and W. at 10.

31, 32—English Poetry from Pope through Byron. Biographical and critical study of the chief poets and their most significant works; lectures accompanied by extensive reading. Professor TRENT. 6 points.

M. and W. at 11.

33, 34—English Prose of the Eighteenth and Early Nineteenth Centuries. Professor BREWSTER. 6 points.

Tu. and Th. at 2.

§ 41, 42—The French Revolution in English Literature. Professor HALLER. 6 points.

M., W., and F. at 2.

§ 43, 44—English Victorian Literature. Professor HUBBARD. 6 points.

M., W., and F. at 11.

Except in special cases, Course 43 is prerequisite to Course 44.

§ 45–46—English Literary Criticism. Professor HUBBARD. 6 points.

Tu. and Th. at 11.

Open, by special permission of the instructor, to qualified juniors and seniors.

§ 47, 48—American Literature. Professor BAKER. 4 points.

Tu. and Th. at 9.

Elocution

X1—Voice Training. Systematic instruction in effective enunciation. Mrs. DAVIS. Prescribed for all students not excused by the Department; to be taken usually in the freshman or the sophomore year; no credit.

M., W., and F. at 10 (I), at 11 (II), at 2 (III) (this section is intended for students from foreign countries), at 3 (IV).

X2—Voice Training. Identical in content and conditions with Course X1. Mrs. DAVIS.

M., W., and F., at 9 (I), at 10 (II), at 1 (III), at 2 (IV).

[53–54—Elocution and Public Speaking. Professor TASSIN. 5 points (elocution, 2 points; public speaking, 3 points).

Not given in 1919–20.]

FINE ARTS AND ARCHITECTURE

Architecture

For other detailed information students are referred to the Announcement of the School of Architecture.

*** 21, 22—Ancient Architecture.** Professor HAMLIN. 4 points.

For hours, consult Announcement of School of Architecture.

*** 23, 24—Medieval and Oriental Architecture.** Professor HAMLIN. 4 points.

For hours, consult Announcement of School of Architecture.

*** 25, 26—Renaissance and Modern Architecture.** Professor HAMLIN. 4 points.

For hours, consult Announcement of School of Architecture.

*** 27—Historic Research: Ancient and Medieval Architecture.** Professor HAMLIN and Curator BACH. The equivalent of 4 hours' research weekly. 2 points.

Hour to be arranged.

Prerequisite or parallel, Course 21, 22, or 23, 24.

* **28—Historic Research: Renaissance and Modern.** Professor HAMLIN and Curator BACH. The equivalent of 4 hours' research weekly. 2 points.

Hour to be arranged.

Prerequisite or parallel, Course 25, 26.

* **31, 32—Ancient Ornament.** Professor HAMLIN. 4 points.

For hours, consult Announcement of School of Architecture.

Prerequisite, the student should consult the instructor before registration.

* **33, 34—Medieval Ornament.** Professor HAMLIN. 4 points.

For hours, consult Announcement of School of Architecture.

Prerequisite, the student should consult the instructor before registration.

* **35, 36—Modern Ornament.** Professor HAMLIN. 4 points.

For hours, consult Announcement of School of Architecture.

[* **42—Decorative Arts.** Curator BACH. 2 points.

Not given in 1919-20.]

* **92—History of Painting.** Curator BACH. 2 points.

For hours, consult Announcement of School of Architecture.

[* **94—History of Sculpture.** Curator BACH. 2 points.

Not given in 1919-20.]

FRENCH. See Romance Languages and Literatures

GEOGRAPHY ¹

1—General Geography including the Elements of Meteorology and Climatology. Professor OGILVIE and assistant. 2 lectures, 2 hours of laboratory work. 3 points.

Hours to be arranged.

Not open to students who offered Physiography at entrance.

[2—Regional and Commercial Geography. 2 lectures, 2 hours of laboratory work. 3 points.

Prerequisite, Course 1, or Entrance Physiography, or Geology 1.

Not given in 1919-20.]

GEOLOGY ¹

1-2—General Geology. Elementary course. Professor OGILVIE, Dr. MOOK, and Miss HOLZWASSER. 2 lectures, 4 hours of laboratory work. 8 points.

Tu. and Th. at 11. Laboratory work, M. and W., 1-3, Tu. and Th., 2-4. Occasional Saturday field trips in the spring.

Students who have had no previous scientific training will meet for occasional conferences and discussions at some hour to be arranged.

5-6—Applied Geology. A study of the application of geology to engineering, water-supply, mining, conservation of natural resources, and industrial development. Professor OGILVIE and Dr. MOOK. 4 points for students who have taken Course 1-2 or its equivalent, 6 points for students who have not taken Course 1-2.

Hours to be arranged.

¹ In the reckoning of points for major and minor subjects, geography, geology and mineralogy may be counted as one subject.

17—Glacial periods, their causes and their after-effects. Professor OGILVIE. 2 points.

Hours to be arranged.

Prerequisite or parallel, Course 1-2.

19—Physiographic Geology. Professor OGILVIE and Miss HOLZWASSER. 2 lectures, 2 hours of laboratory work. 3 points.

Hours to be arranged.

Prerequisite, Course 1-2.

20—Historical Geology, considered in greater detail than in Course 2. Professor OGILVIE and Dr. MOOK. 2 lectures, 2 hours of laboratory work. 3 points.

Hours to be arranged.

Prerequisite, Course 1-2.

113—Summer Field Course. Professor OGILVIE or Dr. MOOK. 2 weeks in the field involving the subsequent preparation of a report. 3 or 4 points.

Time to be arranged.

Prerequisite, Course 1-2.

Registration for this course must be made by April 15. An extra tuition fee is charged, depending upon the number of points of credit.

[115-116—Paleontology. Dr. MOOK. 6 points; or, including Index Fossils, 8 points.

Not given in 1919-20.]

*** 124—Glacial Geology and Advanced Physiography.** Professor OGILVIE. Lectures, reading, field and laboratory work. 3 points.

Hours to be arranged.

Prerequisite, Course 1-2.

125—General Geology. Advanced Course. Professor OGILVIE and Dr. MOOK. 3 points.

Hours to be arranged.

Prerequisite, Course 1-2.

133-134—Vertebrate Paleontology. An introduction to the study of fossil vertebrates. Dr. MOOK. 2 lectures, 2 hours of laboratory work, part of which will be given at the American Museum of Natural History. 6 points.

Hours to be arranged.

135, 136—Local Geology of New York. Field work in autumn and spring; laboratory work and lectures on local topics in winter. Professor OGILVIE. 2 points.

Hours to be arranged.

Prerequisite, Course 1-2.

Journal Club. The instructors in Columbia University and advanced students meet one evening fortnightly for the discussion of current papers and problems. The meetings of the Journal Club are open to Barnard students taking courses in geology.

Other courses given at Columbia University are described in the Announcement of the Division of Geology, Geography, and Mineralogy.

GERMANIC LANGUAGES AND LITERATURES

(See also **Introduction to the Study of the Science of Language**, p. 79)

Under the new requirements in Foreign Languages (see p. 59) no German courses are now prescribed and none can therefore automatically excuse the student from the departmental test in the major requirement. Courses 1-2 and 3, 4, or 5, 6, or 7, 8 would probably enable the student to pass the reading part, and Courses 1a, 2a and 9, 10 the oral part of the special language test, if German is chosen as a major language. Phonographic records are available for further aural and oral practice. The minor requirement can be satisfied, in German, either by a satisfactory grade in Elementary and Intermediate Entrance German (3 units), or by a grade of C or better in Courses 1-2 and 1a, 2a, or Courses 1-2 and 3, 4.

1-2—Beginners' Course. Elements of grammar, easy reading, written and oral practice. Dr. PUCKETT. 6 points.

M., W., and F. at 9.

1a, 2a—Composition and Colloquial Practise. Elementary Course. Drill in German syntax and idiom. Professor BRAUN. 4 points.

Tu. and Th. at 11.

Prerequisite, Course 1-2, or Elementary Entrance German unless German is elected as a minor language requirement when Course 1a, 2a may be taken parallel to Course 1-2.

Students who failed at entrance in German x or German y should elect Course 1a, 2a. When so taken, it will not count for credit towards the degree.

3, 4—Intermediate Course. Rapid reading and syntactical review. Dr. PUCKETT. 6 points.

M., W., and F. at 1.

Prerequisite to Course 3, Course 1-2, Elementary Entrance German, or its equivalent. Prerequisite to Course 4, Course 3 or its equivalent.

5, 6—Selected Dramas of Lessing, Goethe, and Schiller. Professor BRAUN and Dr. PUCKETT. 6 points.

M., W., and F. at 9 (I), at 11 (II).

Prerequisite to Course 5, Course 3, 4, or its equivalent. Prerequisite to Course 6, Course 5.

7, 8—Modern German Prose. Rapid reading of modern German historical, critical, and scientific prose. Structure and development of vocabulary. Dr. PUCKETT. 6 points.

M., W., and F. at 10.

Prerequisite, Course 3, 4, or its equivalent.

9, 10—Intermediate Practice Course. German conversation and themes. Professor BRAUN. 4 points.

Tu. and Th. at 10.

Prerequisite, Course 1a, 2a, or 3, 4.

25, 26—The Drama of the Nineteenth Century. Professor BRAUN. 4 points.

Tu. and Th. at 9.

Prerequisite, Course 5, 6, or 7, 8, or their equivalent.

29—Studies in Literary Forms: The German Lyric. Dr. PUCKETT. 2 points.

Tu. and Th. at 2.

Prerequisite, Course 5, 6, or 7, 8.

30—Studies in Literary Forms: The German Novelle. Dr. PUCKETT. 2 points.

Tu. and Th. at 2.

Prerequisite, Course 5, 6, or 7, 8.

37, 38—History of German Literature from the earliest times to the nineteenth century. Professor BRAUN. 4 points.

M. and W. at 11.

Open to juniors and seniors who have taken Course 5, 6 or 7, 8, or their equivalent.

39, 40—Goethe's Faust; First and Second Parts. Professor THOMAS. 4 points.

Tu. and Th. at 11.

Course 39 is open to juniors and seniors who have taken Course 5, 6 or 7, 8; Course 40, except by special permission of the instructor, is open only to those who have passed Course 39 satisfactorily.

Other courses given at Columbia University are described in the Announcement of the Division of Modern Languages and Literatures.

GOVERNMENT

1, 2—American Government. Winter session, federal government; spring session, state and municipal government. Mr. MACMAHON and Miss ———. 6 points.

M., W., and F. at 2.

Prerequisite, History A1–A2.

Courses in American Municipal Problems, and the Literature of American Government and the Sources of its study, given at Columbia University, are open, with the permission of the Committee on Instruction, to specially qualified seniors and juniors.

GREEK. See **Classical Philology**

HEBREW. See **Semitic Languages**

HISTORY

A1–A2—Epochs of European History, with special reference to forms of government and changes in social conditions. Professors MUZZEY and HUTTMAN. 6 points.

M., W., and F. at 9 (I), at 10 (II); Tu., Th., and S. at 9 (III), at 10 (IV).

Prescribed for freshmen.

[7–8—The History of Greece to the Roman Conquest. Mr. CALDWELL. 6 points.

Prerequisite, Course A1–A2.

Not given in 1919–20.]

Courses 7–8 and 9–10 are given in alternate years.

9–10—The History of Rome to the Disruption of the Empire. Mr. CALDWELL. 6 points.

M., W., and F. at 9.

Prerequisite, Course A1–A2.

11, 12—The History of England. Winter session, from the Norman Conquest through the Tudor period with some consideration of current political events; spring session, from the Stuart period into the 20th century. Professor HUTTMAN. 6 points.

Tu. and Th. at 11, and a third hour to be arranged.

Prerequisite, Course A1–A2.

13, 14—The History of the United States to the Close of the Civil War. Dr. FOX. 6 points.

M., W., and F. at 10.

Prerequisite, Course A1-A2.

15, 16—The History of the United States since 1870, with special reference to economic and social conditions. Professor MUZZEY. 4 points.

Tu. and Th. at 2.

Prerequisite, Course A1-A2.

17, 18—The Development of the European States from the Protestant revolt to the end of the Napoleonic Empire. Professor MUZZEY. 4 points.

Tu. and Th. at 3.

Prerequisite, Course A1-A2.

19, 20—The History of Europe since the Congress of Vienna. Professor HUTTMAN. 6 points.

Tu. and Th. at 10, and a third hour to be arranged.

Prerequisite, Course A1-A2.

[73—Greek Theories of Life and Conduct. Mrs. PUTNAM. 2 points.

Open to juniors and seniors. This course is specially recommended to students taking Course 121.

Not given in 1919-20.]

[121, 122—The History of the Intellectual Class in Europe. 6 points.

Open only to seniors and to specially qualified juniors.

Prerequisite to Course 122, Course 121.

Not given in 1919-20.]

[* 155, 156—Evolution of European Civilization. Professor SHOTWELL. 6 points.

Open to seniors and specially qualified juniors.

Not given in 1919-20.]

*** 169-170—The Expansion of Europe.** Professor SHEPHERD. 6 points.

M., W., and F. at 11.

Open to seniors and specially qualified juniors.

Other courses given at Columbia University are described in the Announcement of the Division of History, Economics and Public Law.

ITALIAN. See Romance Languages and Literatures

LATIN. See Classical Philology

MATHEMATICS

A1-A2 (A4-A5)—Mathematics. A general course covering the elements of trigonometry, analytical geometry, and calculus, designed to emphasize the cultural and vocational aspects of these subjects. Professor MULLINS, Dr. FISCHER, and Dr. LAMSON. 6 points.

A1-A2, M., W., and F. at 9 (I, II), at 10 (III), at 11 (IV); Tu., Th., and S. at 9 (V), at 10 (VI), at 11 (VII).

Mathematics A (complete) is prescribed for all freshmen who enter without trigonometry. Students offering trigonometry at entrance should take Course **A5** to complete the requirement.

A4, the equivalent of **A1**, is prescribed for students entering college in February; **A5**, the equivalent of **A2**, is prescribed for these students in the winter session of the following year.

A4–A5, M., W., and F. at 2.

21—Analytical Geometry. Introduction to the analytical geometry of the plane and of space. Professor KASNER. 3 points.

M., W., and F. at 11.

Prerequisite, Course **A**.

22—Calculus. Elementary course in differential and integral calculus. Professor KASNER. 3 points.

M., W., and F. at 11.

Prerequisite, Course **21**.

23–24—Algebra and Theory of Equations. Algebraic and numerical solution of equations, determinants, complex numbers. Dr. LAMSON. 6 points.

M., W., and F. at 2.

Prerequisite, Course **A**.

25–26—Calculus. Differential and integral calculus. Professor COLE. 6 points.

M., W., and F. at 11.

Prerequisite, Course **22**.

27–28—Projective Geometry and Applications. Professor MULLINS. 6 points.

M., W., and F. at 1.

Prerequisite, Course **21**.

[31–32—Advanced Analytical Geometry. Modern methods in analytical geometry; solid analytical geometry. 6 points.

Prerequisite, Course **25–26**.

Not given in 1919–20.]

[33–34—The Fundamental Concepts of Modern Mathematics. Lectures, discussions, and reports. Professor KASNER. 6 points.

Prerequisite or parallel, Course **25–26**.

Not given in 1919–20.]

35–36—General Introduction to Higher Mathematics. Professor KASNER. 6 points.

M., W., and F. at 10.

Prerequisite or parallel, Course **25–26**.

† **351, 352—History of Mathematics.** Professor D. E. SMITH. 6 points.

M. and W. at 3.

MINERALOGY¹

1—General Mineralogy. Professor OGILVIE and assistant. 1 lecture, 4 hours of laboratory work. 3 points.

Th. at 1. Laboratory hours to be arranged.

Prerequisite, a knowledge of elementary chemistry.

Only given if at least six apply. If there are less than six applications, arrangements can be made for parallel work at Columbia University.

2—Blowpipe Analysis. Professor OGILVIE. 1 lecture, 4 hours of laboratory work. 3 points.

Hours to be arranged.

Laboratory fee, \$1.50.

Prerequisite, Course 1.

Subject to note under Course 1.

[6—Optical Mineralogy. Professor OGILVIE. 1 lecture, 2 hours of laboratory work. 2 points.

Prerequisite, Course 1.

Not given in 1919-20.]

MUSIC

*** 1-2—General Musical Course.** History of Music from Palestrina to the death of Beethoven, with illustrations. Professor MASON. 4 points.

Tu. and Th. at 11.

This course requires no previous knowledge of music.

*** 3-4—General Musical Course, Advanced.** Discussion of modern music. Professor MASON. 4 points.

M. and W. at 10.

Students are advised, though not required, to take Course 1-2, or its equivalent, before Course 3-4. Those who have not taken Course 1-2 will be required during the first few weeks to write a paper on the chief contributions to music of the classic masters: Bach, Haydn, Mozart, and Beethoven,—based on a reading of "The Appreciation of Music" by Surette and Mason.

*** 7, 8—Elementary Harmony.** Mr. BINGHAM and Mr. HOUGH. 6 points.

M., W., and F. at 1.

Prerequisite, an accurate ear, familiarity with notation, and the ability to play simple chord successions on the piano.

*** 11, 12—Counterpoint.** Mr. BINGHAM. 4 points.

Tu. and Th. at 10.

Prerequisite, Course e9-e10, or its equivalent.

Other courses given at Columbia University are described in the Announcement of the Department of Music.

The attention of students is called to the University Chorus and to the University Orchestra, which they are eligible to join, but without credit.

PHILOSOPHY AND PSYCHOLOGY

Philosophy

A—Introduction to Philosophy. Professor MONTAGUE, Dr. PARKHURST, and Mrs. LEAVENWORTH. 3 points.

Winter Session: M., W., and F. at 9 (I), at 11 (III).

Spring session: M., W., and F. at 9 (II); Tu., Th., and S. at 10 (IV).

¹ In the reckoning of points for major or minor subjects, mineralogy and geology may be counted as one subject.

Prescribed for sophomores or freshmen unless Course 61-62 is taken in the junior or senior year.

2—Logic, Inductive and Deductive. Professor MONTAGUE. 3 points.
M., W., and F. at 11.

21-22—Ethics, Individual and Social. Professor LORD. 8 points.
M., W., and F. at 1.
Open to juniors and seniors.

41—Esthetics. Dr. PARKHURST. 3 points.
Tu. and Th. at 11.

Open to juniors and seniors, and to sophomores who have taken, or who are taking, Course A.

61-62—The History of Philosophy. Professor MONTAGUE. 6 points.
M., W., and F. at 9.

Open to juniors and seniors. May be substituted by students of these classes for Course A.

[66—Philosophy of Religion. Professor BUSH. 3 points.
Open to juniors and seniors.
Not given in 1919-20.]

79-80—Contemporary Philosophy. Dr. PARKHURST. 6 points.
Tu. and Th. at 10.
Open to juniors and seniors.

See also **Classical Civilization 59**, a course in Greek and Roman Philosophy in Translation, p. 83.

Other courses given at Columbia University are described in the Announcement of the Division of Philosophy, Psychology and Anthropology.

Psychology

A—Introductory Course. Professor HOLLINGWORTH, Dr. PARKHURST, and Mrs. LEAVENWORTH. 3 points.

Winter session: M., W., and F. at 9 (I); Tu., Th., and S. at 10 (III).

Spring session: M., W., and F. at 9 (II); at 11 (IV).

Prescribed for sophomores or freshmen unless **Philosophy 61-62** is taken in junior or senior year.

7-8—Experimental Psychology. Professor HOLLINGWORTH and Miss STICKLAND. 2 lectures, 4 hours of laboratory work. 8 points.

W. and F. at 10. Laboratory work, M. at 10, and Tu., 2-5, or W. and F., 1-4.
Prerequisite, Course A or its equivalent.

109-110—Abnormal Psychology. Professor HOLLINGWORTH. 2 lectures and special clinical demonstrations. 4 points.

W. and F. at 11. Clinics to be arranged.

Prerequisite, Course 7-8 or its equivalent.

119—Mental Measurement. Professor HOLLINGWORTH. 1 lecture, 2 hours of laboratory work. 2 points.

M. at 11. Laboratory work, M. 1-3.

Prerequisite, Course 7-8 or its equivalent.

Principles and technique of mental measurement, development and forms of mental tests and scales, and application of these methods in clinical practice, educational guidance, personnel selection and vocational direction.

* **120—Mental Measurement.** Professor WOODWORTH. 1 lecture, 2 hours of laboratory work. 2 points.

M. at 11. Laboratory work, M. 1-3.

Prerequisite, Course 7-8 or its equivalent, and Course 119.

Group survey methods and class tests, as distinguished from the methods of individual examination.

Other courses in psychology, given in Columbia University, may be elected by specially qualified students who have completed the courses offered at Barnard.

PHYSICAL EDUCATION

A—Courses A1, A2, and A3 (2 points) are prescribed for all freshmen entering in September; **A2** and **A4** (1 point) are prescribed for freshmen entering in February. The work is divided as follows:

A1, A2—Graded Gymnastics, Swimming, Dancing, Organized Games, 3 hours a week.

Graded gymnastics, M. and W. at 2, or, for students who have a conflict at this hour, M. and W. at 10.

Swimming, dancing, organized games, F. at 2, or at 10, subject to the approval of the Department.

A3—General hygiene lecture: Tu. at 11 (I); Th. at 1 (II).

A4—Identical in content with A3, prescribed for students entering in February: F. at 1.

B—Courses B1, B2, and B3 or B4 are prescribed for all sophomores. 2 points. The work is divided as follows:

B1, B2—Graded Gymnastics, Swimming, Dancing, Organized Games, 3 hours a week.

Graded gymnastics, M. and W. at 11, or, for students who have a conflict at this hour, M. and W. at 3.

Swimming, dancing, organized games, F. at 11, or at 3, subject to the approval of the Department.

B3—First Aid lecture. S. at 11 (I); F. at 1 (II).

B4—Identical in content with B3, prescribed for students who were unable because of conflict to take **B3** in the winter session, or who took **A3** in that session: Th. at 1.

Any freshman or sophomore who passes the objective test may be exempt from graded gymnastics and take three periods of elective work.

C1, C2—Swimming, Dancing, Games, Other Sports, or prescribed work. 1 point.

Tu. and Th. at 10, or at 2.

Prescribed for all juniors.

N. B. A course in human biology (see Zoology C) is prescribed for juniors unless, under special circumstances, permission is given to postpone the course until the senior year.

11, 12—Graded Gymnastics, Swimming, Organized Games, or Dancing, subject to the approval of the Department. No credit.

Hours to be arranged.

Open to seniors. May be prescribed in special cases.

101, 102—Graded Gymnastics, Dancing, Organized Games, Swimming, for women graduate students under the Faculties of Philosophy, Political Science and Pure Science, and women students in the Schools of Architecture, Business, Journalism, and Medicine. 2 points.

Graded gymnastics, M. and W. at 10, or at 3.

Dancing, swimming, organized games, F. at 10, or at 3.

Other sections are open provided the registration is not already filled by undergraduate students.

Every student in Barnard College is required to pay an annual gymnasium fee of \$7.00, and a small charge for a locker key if she is registered in the Department of Physical Education.

The prescribed gymnasium and field costume consists of dark-blue bloomers, white sailor blouses. Approximate cost, \$10.00. Swimming suits, \$1.50. Costumes to be purchased at Students Hall.

PHYSICS

1-2—Elementary Course in General Physics. Professor MALTBY, Miss LANGFORD, and ————. 3 hours of lectures and discussions, 2 hours of laboratory work. 8 points.

M., W., and F. at 11.

This course is intended for students who have never studied physics and do not intend to enter a medical school.

11-12—General Physics. Professor MALTBY, Miss LANGFORD, and ————. 2 hours of lectures, 1 hour of discussion, 2 hours of laboratory work. 8 points. Students intending to enter a medical school must take this course with 3 hours of laboratory work. 9 points.

Tu. and Th. at 11, and F. at 2. (If there are conflicts in this third hour, another division may be arranged.)

Prerequisite, Entrance Physics, except by special arrangement.

31—Mechanics. Miss LANGFORD. 3 hours, lectures and discussions, 2 or 4 hours of laboratory work. 4 or 5 points.

M., W., and F. at 9 (or hours to be arranged).

Prerequisite, Course 1-2, or 11-12, except by special arrangement.

32—Heat and the Properties of Matter. ————. 3 hours, lectures and discussions, 2 or 4 hours of laboratory work. 4 or 5 points.

M., W., and F. at 9 (or hours to be arranged).

Prerequisite, Course 31, except by special arrangement.

33—Sound. Professor MALTBY. 3 hours, lectures and discussions, 2 hours of laboratory work. 4 points.

Hours to be arranged.

Prerequisite, Course 1-2, or 11-12.

34—Light. Miss LANGFORD. 3 hours, lectures and discussions, 2 hours of laboratory work. 4 points.

Hours to be arranged.

Prerequisite, Course 1-2, or 11-12.

35—Electricity and Magnetism. Miss LANGFORD. 3 hours, lectures and discussions, 2 or 4 hours of laboratory work. 4 or 5 points.

Hours to be arranged.

Prerequisite, Courses 31 and 32, except by special arrangement.

36—Electricity. Miss LANGFORD. 3 hours, lectures and discussions, 2 or 4 hours of laboratory work. 4 or 5 points.

Hours to be arranged.

Prerequisite, Course 35.

137—History of the Development of Some Fundamental Theories in Physics. Professor MALTBY. Lectures, readings, reports and discussions. 3 points.

Hours to be arranged.

Prerequisite, some of the advanced courses in physics.

This course is designed to give the students a more comprehensive view, of the development of certain fundamental theories, of the experiments which have been crucial, and the bearing of experimental evidence from various fields of physics upon these theories.

138—Theory of Electricity. Professor MALTBY. Readings and discussions. 3 points.

Hours to be arranged.

Prerequisite, Courses 35, 36.

POLITICS. See **Government**

PSYCHOLOGY. See **Philosophy and Psychology**

RELIGION

1, 2—The Bible. The object of this course is to give a comprehensive survey of the Bible, Old Testament and New, in the light of modern scholarship. Chaplain Knox. 4 points.

Tu. and Th. at 11.

Open to all students.

3—Some Fundamentals of Religion. A restatement of religion, particularly of the fundamental ideas of Christianity in the light of accepted results, and of the modern mind. Dr. ADAM. 2 points.

Th., 2-4.

Open to all students.

5—The Social Application of Christianity. Dr. ADAM. 2 points.

W., 2-4.

Open to all excepting freshmen.

ROMANCE LANGUAGES AND LITERATURES

(See also **Introduction to the Study of the Science of Language**, p. 79)

French

Under the new requirements in Foreign Languages (see p. 59) no French courses are now prescribed and none can therefore automatically excuse the student from the departmental test in the major requirement. Courses 1a, 2a, and 3, 4 would probably enable a student to pass the special language test, if French is chosen as a major language. The minor requirement can be satisfied, in French, by a satisfactory grade in Intermediate Entrance French or by a grade of C or better in Course 1-2.

1-2—Elementary Course. Grammar, Reading, Conversation. Professor MULLER, Dr. ALEXANDER, Dr. LEDUC, and Miss GREGORY. 8 points.

Recitations: M., W., and F. at 9 (I), at 1 (II); Tu., Th., and S. at 10 (III).

Practical work: Tu. and Th. at 9 (IV); W. and F. at 9 (V); Th. at 1 (VI) (This section is only for students who failed at entrance in French x or French y).

Students who begin the study of French in college must take the complete course consisting of 3 recitations and 2 hours of practical work in any combination of sections. The practical work alone does not count for credit towards the degree.

1a, 2a—Reading, Composition, Syntax. Professor MULLER, Dr. ALEXANDER, Miss PRENEZ, and Miss GREGORY. 6 points.

M., W., and F. at 11 (I), at 2 (II); Tu., Th., and S. at 9 (III).

Prerequisite to Course 1a, Course 1-2, or Elementary Entrance French.

Prerequisite to Course 2a, Course 1a, or Intermediate Entrance French.

3, 4—General Introduction to the Study of French Literature. Reading, composition, and lectures. Professor MULLER, Dr. ALEXANDER, Dr. LEDUC and Miss PRENEZ. 6 points.

M., W., and F. at 9 (I), at 1 (II), at 10 (III) (for students who passed the examination in Intermediate Entrance French with high rating, and who intend to continue the subject); Tu., Th., and S. at 10 (IV).

Prerequisite, Course 1a, 2a, or its equivalent.

5, 6—History of French Literature in the Seventeenth Century.¹ Professor LOISEAUX. 6 points.

M., W., and F. at 10.

Prerequisite, grade C in Course 3, 4.

7, 8—Modern French Writers.¹ Practical course. Miss PRENEZ. 6 points.

M., W., and F. at 1.

Prerequisite, Course 3, 4, or the equivalent of Course 2a, with special training in the practical use of the language.

9, 10—French Composition. Prose study, practice in syntax and idioms. Dr. LEDUC. 4 points.

Tu. and Th. at 9 (I) (for students who have taken Course 2a); at 11 (II) (for students who have taken Course 3, 4).

11, 12—French Conversation. Practical phonetics, corrective exercises and elements of diction. Professor LOISEAUX. 2 hours weekly. 2 points.

Hours to be arranged.

Prerequisite, Course 2a, or any higher course.

In Course 12, a section will be reserved for seniors who intend to teach French.

17, 18—History of the French Drama.¹ Professor MULLER. 6 points.

M., W., and F. at 2.

Prerequisite, Course 5, 6.

19, 20—History of French Civilization.¹ Lectures, discussions and reports. Professor LOISEAUX. 4 points.

M. and W. at 2.

Prerequisite, Course 5, 6.

¹ Conducted entirely in French.

*** 113, 114—French Literature in the Eighteenth Century.**¹ Professor ———. 6 points.

M., W., and F. at 3.

Prerequisite, Course 5, 6.

*** 121, 122—De la reconstruction nationale à l'individualisme (1871–1914).** Professor BALDENSPERGER. 4 points.

Th. at 4.

Open to specially qualified students by permission of the department.

Other courses given at Columbia University are described in the Announcement of the Division of Modern Languages and Literatures.

Italian

1–2—General Introduction to the Italian Language and Literature. Grammar and easy Italian texts. Professor ———. 6 points.

M., W., and F. at 1.

This course may not be taken at the same time with Spanish 1–2.

Other courses given at Columbia University are described in the Announcement of the Division of Modern Languages and Literatures.

Spanish

1–2—Elementary Course. Grammar, reading, composition. Dr. LEDUC, Miss GREGORY and Miss ———. 6 points.

M., W., and F. at 11 (I), at 9 (II), at 1 (III); Tu., Th., and S. at 10 (IV).

This course may not be taken at the same time with Italian 1–2.

3, 4—Advanced Course. Grammar, reading, composition. Miss ———. 6 points.

M., W., and F. at 10 (I); Tu., Th. and S. at 9 (II).

Prerequisite, Course 1–2.

5, 6—Practical Course and Introduction to Spanish Literature. Lectures, discussions and reports. Professor LOISEAUX. 6 points.

M., W., and F. at 11.

Prerequisite, Course 3, 4, or its equivalent.

Other courses given at Columbia University are described in the Announcement of the Division of Modern Languages and Literatures.

Romance Philology

A course, Introduction to Romance Philology (Phonology, winter session; Morphology, spring session), is open to properly qualified seniors by permission of the department.

SEMITIC LANGUAGES

Course 101, 102, Elementary Course in Biblical Hebrew, Dr. HIRTI, is open with the consent of the Department of Semitic Languages and the Committee on Instruction to specially qualified juniors and seniors.

SOCIOLOGY. See Economics and Sociology

SPANISH. See Romance Languages and Literatures

¹ Conducted entirely in French.

ZOÖLOGY

C—Human Biology (in cooperation with the Department of Physical Education.) General anatomy, physiology and development of the human type in comparison with other organisms; the physiological basis of individual hygiene; human genetics. Professor CRAMPTON and Dr. ALSOP. 2 points.

Spring session only, Tu. and Th. at 9.

Prescribed for juniors, but may under special circumstances be postponed to the senior year.

1-2—General Biology and General Zoölogy. Elementary course. Professors CRAMPTON and GREGORY, Mrs. LOWTHER, Miss HUGHES, Miss TAPPAN, and Miss ———. 2 lectures, 4 hours of laboratory work. 8 points.

Tu. at 2 and Th. at 1. Laboratory work, Tu., 3-5 and Th., 2-4, or W. and F., 1-4 and possibly also Tu. and Th., 9-12.

Laboratory fee, \$5.00.

Open to sophomores, juniors, and seniors.

3—Histology. Mrs. LOWTHER. 1 lecture, 2 hours of laboratory work. 2 points.

W., at 9. Laboratory work, W., 10-12 preferably.

Laboratory fee, \$2.50, unless taken with Course 1, or Course 53.

Prerequisite or parallel, Course 1. Recommended as a parallel to Course 1.

4—Embryology. Professor CRAMPTON and Miss HUGHES. 1 lecture, 2 hours of laboratory work. 2 points.

W. at 9. Laboratory work, W., 10-12 preferably.

Laboratory fee, \$2.50, unless taken with Course 2 or Course 102.

Prerequisite or parallel, Course 1-2. Recommended as a parallel to Course 2.

53, 54—Practical Zoölogy and Embryology. Mrs. LOWTHER and Miss HUGHES. 4 hours of conference and laboratory work. 4 points.

Hours to be arranged.

Laboratory fee, \$5.00.

Prerequisite, Course 1-2.

101, 102—General Zoölogy. Advanced course. Professor CRAMPTON, Mrs. LOWTHER, and Miss HUGHES. 3 lectures, 6 hours of laboratory work. 12 points.

M., W., and F., 9-12.

Laboratory fee, \$5.00.

Prerequisite, Courses 1-2 and 4.

151-152—General Physiology. General principles of animal physiology. Professor GREGORY. 2 lectures, 4 hours of demonstration and laboratory work. 8 points.

Tu. and Th., 9-12.

Laboratory fee, \$5.00.

Open to juniors and seniors.

Prerequisite, Course 1-2, or its equivalent, and elementary physics and chemistry.

SCHEME OF

HOURS	MONDAY	TUESDAY	WEDNESDAY
A.M.	Classical Civilization 59 Economics A1-A2 (I) †Education A (III) English A1, A2 (IV) English X2 (I) English 23, 24 French 1-2 (I) French 3, 4 (I) German 1-2 German 5, 6 (I) Greek 21, 22 History A1-A2 (I) History 9-10 Latin 14, 15 Mathematics A1-A2 (I, II) Philosophy A (I, II) Philosophy 61-62 Physics 31, 32 Psychology A (I, II) Spanish 1-2 (II) Zoölogy 101, 102	Chemistry 41-42 Economics A1-A2 (IV) English A1, A2 (I) English A4, A5 (I) English 47, 48 French 1-2 (IV) French 1a, 2a (III) French 9, 10 (I) German 25, 26 History A1-A2 (III) Latin 11, 12 (II) Mathematics A1-A2 (V) Spanish 3, 4 (II) Zoölogy C Zoölogy 151-152	Classical Civilization 59 Economics A1-A2 (I) †Education A (III) English A1, A2, (IV) English X2 (I) English 23, 24 French 1-2 (I) French 1-2 (V) French 3, 4 (I) German 1-2 German 5, 6 (I) Greek 21, 22 History A1-A2 (I) History 9-10 Latin 14, 15 Mathematics A1-A2 (I, II) Philosophy A (I, II) Philosophy 61-62 Physics 31, 32 Psychology A (I, II) Spanish 1-2 (II) Zoölogy 3, 4 Zoölogy 101, 102
9			
10	Botany 51-52 Economics A1-A2 (II) Economics 11-12 †Education A (II, IV) English A1, A2 (V) English XI (I) English X2 (II) English 11, 12 English 19, 20 English 29, 30 French 3, 4 (III) French 5, 6 German 7, 8 Greek 11, 12 History A1-A2 (II) History 13, 14 Mathematics A1-A2 (III) Mathematics 35-36 *Music 3-4 Psychology 7-8 Spanish 3, 4 (I) Zoölogy 101, 102	Botany 53-54 Chemistry 42a Chemistry 63, 64 Classical Civilization 51, 52 Economics A1-A2 (V) Economics 111, 112 †Education B (II) English A1, A2 (II) English 1, 2 English 5, 6 English 15, 16 English 25, 26 (I) French 1-2 (III) French 3, 4 (IV) German 9, 10 History A1-A2 (IV) History 19, 20 Latin 17, 18 Mathematics A1-A2 (VI) *Music 11, 12 Philosophy A (IV) Philosophy 79-80 Psychology A (III) Spanish 1-2 (IV) Zoölogy 151-152	Botany 51-52 Economics A1-A2 (II) Economics 11-12 †Education A (II, IV) English A1, A2 (V) English XI (I) English X2 (II) English 11, 12 English 19, 20 English 29, 30 French 3, 4 (III) French 5, 6 German 7, 8 Greek 11, 12 History A1-A2 (II) History 13, 14 Mathematics A1-A2 (III) Mathematics 35-36 *Music 3-4 Psychology 7-8 Spanish 3, 4 (I) Zoölogy 101, 102
11	Chemistry 5-6 Economics A1-A2 (III) Economics 1-2 English A1, A2 (VI) English XI (II) English 31, 32 English 43, 44 French 1a, 2a (I) German 5, 6 (II) German 37, 38 *History 169-170 Mathematics A1-A2 (IV) Mathematics 21, 22 Mathematics 25-26 Philosophy A (III) Philosophy 2 Physics 1-2 Psychology A (IV) Psychology 119 *Psychology 120 Spanish 1-2 (I) Spanish 5, 6 Zoölogy 101, 102	Botany 153, 154 Classical Civilization 55, 56 English A1, A2 (III) English 3, 4 English 45-46 French 9, 10 (II) Geology 1-2 German 1a, 2a German 39, 40 Greek 25, 26 History 11, 12 Mathematics A1-A2 (VII) *Music 1-2 Philosophy 41 Physical Education A3 (I) Physics 11-12 Religion 1, 2 Zoölogy 151-152	Chemistry 5-6 Economics A1-A2 (III) Economics 1-2 English A1, A2 (VI) English XI (II) English 31, 32 English 43, 44 French 1a, 2a (I) German 5, 6 (II) German 37, 38 *History 169-170 Mathematics A1-A2 (IV) Mathematics 21, 22 Mathematics 25-26 Philosophy A (III) Philosophy 2 Physics 1-2 Psychology A (IV) Psychology 109-110 Spanish 1-2 (I) Spanish 5, 6 Zoölogy 101, 102

Courses marked with an asterisk [*] are given at Columbia University;

ATTENDANCE

THURSDAY	FRIDAY	SATURDAY
Chemistry 41-42 Economics A1-A2 (IV) English A1, A2 (I) English A4, A5 (I) English 47, 48 French 1-2 (IV) French 1a, 2a (III) French 9, 10 (I) German 25, 26 History A1-A2 (III) Latin 11, 12 (II) Mathematics A1-A2 (V) Spanish 3, 4 (II) Zoology C Zoology 151-152	Classical Civilization 59 Economics A1-A2 (I) †Education A (III) English A1, A2 (IV) English X2 (I) English 23, 24 French 1-2 (I) French 1-2 (V) French 3, 4 (I) German 1-2 German 5, 6 (I) Greek 21, 22 History A1-A2 (I) History 9-10 Latin 14, 15 Mathematics A1-A2 (I, II) Philosophy A (I, II) Philosophy 61-62 Physics 31, 32 Psychology A (I, II) Spanish 1-2 (II) Zoology 101, 102	Economics A1-A2 (IV) English A1, A2 (I) English A4, A5 (I) French 1a, 2a (III) History A1-A2 (III) Latin 11, 12 (II) Mathematics A1-A2 (V) Spanish 3, 4
Botany 53-54 Chemistry 42a Chemistry 63, 64 Classical Civilization 51, 52 Economics A1-A2 (V) Economics 111, 112 †Education B (II) English A1, A2 (II) English 1, 2 English 5, 6 English 15, 16 English 25, 26 (I) French 1-2 (III) French 3, 4 (IV) German 9, 10 History A1-A2 (IV) History 19, 20 Latin 17, 18 Mathematics A1-A2 (VI) *Music 11, 12 Philosophy A (IV) Philosophy 79-80 Psychology A (III) Spanish 1-2 (IV) Zoology 151-152	Botany 51-52 Economics A1-A2 (II) Economics 11-12 †Education A (II, IV) English A1, A2 (V) English X1 (I) English X2 (II) English 11, 12 English 19, 20 French 3, 4 (III) French 5, 6 German 7, 8 Greek 11, 12 History A1-A2 (II) History 13, 14 Mathematics A1-A2 (III) Mathematics 35-36 Psychology 7-8 Spanish 3, 4 (I) Zoology 101, 102	Economics A1-A2 (V) †Education B (II) English A1, A2 (II) English 25, 26 (I) French 1-2 (III) French 3, 4 (IV) History A1-A2 (IV) Latin 17, 18 Mathematics A1-A2 (VI) Philosophy A (IV) Psychology A (III) Spanish 1-2 (IV)
Botany 153, 154 Classical Civilization 55, 56 English A1, A2 (III) English 3, 4 English 45-46 French 9, 10 (II) Geology 1-2 German 1a, 2a German 39, 40 Greek 25, 26 History 11, 12 Mathematics A1-A2 (VII) *Music 1-2 Philosophy 41 Physics 11-12 Religion 1, 2 Zoology 151-152	Chemistry 5-6 Economics A1-A2 (III) Economics 1-2 English A1, A2 (VI) English X1 (II) English 43, 44 French 1a, 2a (I) German 5, 6 (II) History 169-170 Mathematics A1-A2 (IV) Mathematics 21, 22 Mathematics 25-26 Philosophy A (III) Philosophy 2 Physics 1-2 Psychology A (IV) Psychology 109-110 Spanish 1-2 (I) Spanish 5, 6 Zoology 101, 102	English A1, A2 (III) English 3, 4 Mathematics A1-A2 (VII) Physical Education B3 (I)

those marked with a dagger [†] are given at Teachers College.

SCHEME OF

HOURS	MONDAY	TUESDAY	WEDNESDAY
P.M.	Anthropology 1, 2 Chemistry 105-106 English A4, A5 (II) English X2 (III) English 25, 26 (II) French 1-2 (II) French 3, 4 (II) French 7, 8 German 3, 4 Italian 1-2 Latin 11, 12 (I) Latin 21, 22 Mathematics 27-28 *Music 7, 8 Philosophy 21-22 Spanish 1-2 (III)		Anthropology 1, 2 Chemistry 105-106 English A4, A5 (II) English X2 (III) English 25, 26 (II) French 1-2 (II) French 3, 4 (II) French 7, 8 German 3, 4 Italian 1-2 Latin 11, 12 (I) Latin, 21, 22 Mathematics 27-28 *Music 7, 8 Philosophy 21-22 Spanish 1-2 (III)
1.10			
2.10	†Education 281 (I) English X1 (III) English X2 (IV) English 13, 14 English 27, 28 English 41, 42 French 1a, 2a (II) French 17, 18 French 19, 20 Government 1, 2 Greek 1-2 Greek 41, 42 Latin 1-2 Latin 3 Mathematics A4-A5 Mathematics 23-24	Astronomy 1, 2 Classical Civilization 53, 54 English 33, 34 German 29, 30 Greek 1-2 History 15, 16 Latin 1-2 Latin 25, 26 Science of Language 1, 2 Zoölogy 1-2	†Education 281 (I) English X1 (III) English X2 (IV) English 13, 14 English 27, 28 English 41, 42 French 1a, 2a (II) French 17, 18 French 19, 20 Government 1, 2 Greek 1-2 Greek 41, 42 Latin 1-2 Latin 3 Mathematics A4-A5 Mathematics 23-24 Religion 5
3.10	Classical Civilization 57, 58 †Education B (I) English X1 (IV) *French 113, 114 †Mathematics 351, 352	History 17, 18 Latin 41, 42	Classical Civilization 57, 58 †Education B (I) English X1 (IV) *French 113, 114 †Mathematics 351, 352 Religion 5
4.10	†Education 281 (II)	Botany 151-152 English 7, 8 (4-5.50)	†Education 281 (II)

Courses marked with an asterisk [*] are given at Columbia University;

ATTENDANCE

THURSDAY	FRIDAY	SATURDAY
Astronomy 1, 2 Chemistry 65, 66 Chemistry 105-106 French 1-2 (VI) Latin 25, 26 Mineralogy 1 Physical Fducation A3 (II) Physical Education B4 Zoölogy 1-2	Anthropology 1, 2 Chemistry 42a Chemistry 63, 64 English A4, A5 (II) English X2 (III) English 25, 26 (II) French 1-2 (II) French 3, 4 (II) French 7, 8 German 3, 4 Italian 1-2 Latin 11, 12 (I) Latin 21, 22 Mathematics 27-28 *Music 7, 8 Philosophy 21-22 Physical Education A4 Physical Education B3 (II) Spanish 1-2 (III)	
Classical Civilization 53, 54 English 33, 34 German 29, 30 Greek 1-2 History 15, 16 Latin 1-2 Religion 3 Science of Language 1, 2	Chemistry 41-42 English X1 (III) English X2 (IV) English 13, 14 English 27, 28 English 41, 42 French 1a, 2a (II) French 17, 18 Government 1, 2 Greek 1-2 Greek 41, 42 Latin 1-2 Latin 3 Mathematics A4-A5 Mathematics 23-24 Physics 11-12	
Botany 55-56 History 17, 18 Latin 41, 42 Religion 3	†Education B (I) English X1 (IV) *French 113, 114	
Botany 151-152 *French 121, 122	†Education 283 †Education 284	

those marked with a dagger [†] are given at Teachers College.

ACADEMIC CALENDAR

1919-1920

1919

- July 7—Monday, Twentieth Summer Session of Columbia University begins.
Aug. 15—Friday, Twentieth Summer Session of Columbia University ends.
Sept. 8—Monday, Last day for filing applications for entrance and deficiency examinations, and for advanced standing. The privilege of later application may be granted on payment of a fee of \$5.
Sept. 15—Monday, Entrance examinations and examinations for deficient students begin.
Sept. 17—Wednesday, Registration (including the payment of fees) begins.
Sept. 23—Tuesday, Registration ceases for students previously matriculated. The privilege of later registration may be granted on payment of a fee of \$5.
Sept. 24—Wednesday, Winter Session, 31st year, begins.
Registration ceases for students matriculating for the first time. The privilege of later registration may be granted on payment of a fee of \$5.
Oct. 21—Tuesday, Stated meeting of University Council.
Nov. 4—Tuesday, Election Day, holiday.
Nov. 26—Wednesday, Annual Thanksgiving Service in St. Paul's Chapel.
Nov. 27—Thursday,
to
Nov. 29—Saturday, inclusive, Thanksgiving holidays.
Dec. 7—Sunday, Annual Commemoration Service in St. Paul's Chapel.
Dec. 16—Tuesday, Stated meeting of University Council.
Dec. 22—Monday,
to

1920

- Jan. 3—Saturday, inclusive, Christmas holidays.
Jan. 8—Thursday, Last day for filing applications for January entrance examinations and for admission to advanced standing. The privilege of later application may be granted on payment of a fee of \$5.
Jan. 15—Thursday, January entrance examinations begin.
Jan. 21—Wednesday, Mid-year examinations begin.
Jan. 31—Saturday, Registration (including the payment of fees) begins.
Feb. 3—Tuesday, Winter Session ends.
Registration ceases for students entering the Spring Session. The privilege of later application may be granted on payment of a fee of \$5.
Feb. 4—Wednesday, Spring Session begins.
Feb. 17—Tuesday, Stated meeting of University Council.
Feb. 23—Monday, Washington's Birthday, holiday.
April 1—Thursday, Last day for filing applications for non-competitive scholarships.

- April 1—Thursday,
to
April 5—Monday, inclusive, Easter holidays.
April 20—Tuesday, Stated meeting of University Council.
May 17—Monday, Final examinations begin.
May 30—Sunday, Baccalaureate service.
May 31—Monday, Memorial Day, holiday.
June 2—Wednesday, Commencement Day.
June 9—Wednesday, Spring Session ends.
June 21—Monday, Examinations of the College Entrance Examination Board begin. The dates for filing applications are contained in a circular issued by the Board, 431 West 117th Street, New York, N. Y.
July 6—Tuesday, Twenty-first Summer Session of Columbia University begins.
Aug. 13—Friday, Twenty-first Summer Session of Columbia University ends.
Sept. 6—Monday, Last day for filing applications for entrance or deficiency examinations, and for advanced standing. The privilege of later application may be granted on payment of a fee of \$5.
Sept. 13—Monday, Entrance examinations and examinations for deficient students begin.
Sept. 15—Wednesday, Registration (including the payment of fees) begins.
Sept. 21—Tuesday, Registration ceases for students previously matriculated. The privilege of later registration may be granted on payment of a fee of \$5.
Sept. 22—Wednesday, Winter Session, 32d year, begins. Registration ceases for students matriculating for the first time. The privilege of later registration may be granted on payment of a fee of \$5.

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